



**FEDERAL AVIATION ADMINISTRATION
AIRWORTHINESS DIRECTIVES
LARGE AIRCRAFT**

BIWEEKLY 2000-03

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U.S. Department of Transportation
Federal Aviation Administration
Regulatory Support Division
Airworthiness Programs Branch, AFS-610
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LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
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Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; + - See AD for additional information.

Biweekly 2000-01

99-27-01		Pratt & Whitney	Engine: JT8D-209, -217, -217A, -217C, and -219
99-27-03		Fokker	F27 Mark 050 Series
99-27-04		Rolls-Royce	Engine: Dart 506, 510, 511, 514, 525, 526, 529, 530, +
99-27-05		Boeing	767-200, -300, and -300F Series
99-27-06		Boeing	757-200, -200PF, and -200CB Series
99-27-07	S 98-25-53	Airbus	A300 B4-600R and A300 F4-600R Series
99-27-08		SAAB	SAAB SF340A and SAAB 340B Series
99-27-09		Airbus	A300 B4-203 Series
99-27-10		Airbus	A310 and A300-600 Series
99-27-11		British Aerospace	BAC 1-11 200 and 400 Series
99-27-13		Fokker	F27 Mark 050 Series
99-27-14	S 99-01-15	Airbus	A340-211, -212-, -213, -311, -312, and -313 Series
99-27-15		General Electric	Engine: GE90-76B, -77B, -85B, -90B, and -92B
99-27-16		CFE	Engine: CFE738-1-1B
2000-01-51	E	Bombardier	CL-600-2B16 (CL-604)

Biweekly 2000-02

98-19-15 R1	R 98-19-15	Fairchild	SA226-T, SA226-T(B), SA226-AT, SA226-TC +
99-26-21		Boeing	737-300, -400, -500, -600, -700, and -800 Series
2000-01-01		Airbus	A300 B2-1A, B2-1C, B2-203, B2K-3C, B4-103, B4-2C +
2000-01-02		Raytheon	BAe.125 Series 1000A and 1000B and Hawker 1000 Series
2000-01-03		SAAB	SAAB 2000 Series
2000-01-04		SAAB	SAAB 2000 Series
2000-01-07		Bombardier	DHC-8-100, -200, and -300 Series
2000-01-08		British Aerospace	ATP
2000-01-09		General Electric	Engine: CJ610 Series and CF700 Series
2000-01-12	S 97-14-11	Bombardier	CL-600-2B19 (Regional Jet Series 100) Series
2000-01-13	S 99-08-12	Pratt & Whitney	Engine: JT9D-7, -7A, -7H, -7AH, -7F, -7J, -20, -20J +
2000-01-14		Boeing	777 Series
2000-01-15		Fokker	F27 Mark 050 Series
2000-01-17		McDonnell Douglas	MD-90 Series
2000-01-18		McDonnell Douglas	DC-8 Series
2000-01-51		Bombardier	CL-604 variant of Canadair Model CL-600-2B16 Series
2000-02-01		McDonnell Douglas	DC-8 Series
2000-02-02		Short Brothers	SD3-60 SHERPA, SD3-SHERPA Series and SD3-30 Series
2000-02-03		Boeing	737-300, -400, and -500 Series
2000-02-04		Airbus	A300 Series, A300-600, and A310 Series
2000-02-13		Bombardier	DHC-8-100, -200, and -300 Series

Biweekly 2000-03

99-26-03	COR	McDonnell Douglas	MD-11 Series
2000-02-05	S 98-24-01	British Aerospace	Jetstream 4101
2000-02-06		Bombardier	DHC-8-100, -200, and -300 Series
2000-02-07		Bombardier	DHC-7-100 Series
2000-02-08		Dornier	328-100 Series
2000-02-10		Boeing	747 Series
2000-02-11		Boeing	777-200 Series
2000-02-15		Raytheon	65-90, 65-A90, B90, and C90
2000-02-17		Rolls-Royce	Engine: RB211 Trent 768-60, 772-60, and 772B-60 Series
2000-02-18	S 97-09-14	Boeing	737-100, -200, -300, -400, and -500 Series
2000-02-19	S 90-02-16	Boeing	727 Series
2000-02-20	S 95-13-12 R1	Boeing	767 Series

LARGE AIRCRAFT

AD No.	Information	Manufacturer	Applicability
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Info: E - Emergency; COR - Correction; S - Supersedes; R - Revision; + - See AD for additional information.

Biweekly 2000-03 - Cont'd

2000-02-21		British Aerospace	Jetstream 4101
2000-02-22		Boeing	747-400 Series
2000-02-23		McDonnell Douglas	DC-9-10, -20, -30, -40, and -50 Series and DC-9-81, +
2000-02-24		Airbus	A300, A310, and A300-600 Series
2000-02-33		Boeing	747-400 Series
2000-02-34		Bombardier	CL-600-2B19 (Regional Jet Series 100) Series
2000-02-35		Raytheon	DH.125, HS.125, BH.125 Series 1A, 1B, 3A, 400A, +
2000-02-36	S 98-20-10	Airbus	A319, A320, and A321 Series
2000-02-37		Boeing	747 Series
2000-02-38	S 91-20-07	Airbus	A300, A300-600, and A310 Series
2000-03-01		Boeing	747-100 and -200 Series
2000-03-02		General Electric	Engine: GE90-90B, -85B, and -76B Series Turbofan
2000-03-03		General Electric	Engine: CF34-3A1 and -3B1 Series Turbofan
2000-03-51	EMER	McDonnell Douglas	DC-9, MD-90-30, 717-200, and MD-88

**MCDONNELL DOUGLAS
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

Correction issued January 26, 2000

99-26-03 MCDONNELL DOUGLAS: Amendment 39-11463. Docket 99-NM-262-AD.

Applicability: Model MD-11 series airplanes, as listed in McDonnell Douglas Alert Service Bulletin MD11-24A160, Revision 01, dated November 11, 1999; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (b) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent damage to the wire assembly terminal lugs and power feeder cables due to the accumulated effects over time from overheating of the power feeder cables on the No. 3 and 4 galley load control unit (GLCU), which could result in smoke and fire in the central accessory compartment (CAC); accomplish the following:

(a) Within 60 days after the effective date of this AD, perform a general visual inspection of the power feeder cables, terminal strip, fuseholder, and fuses of the GLCU within the No. 3 bay electrical power center to detect damage (i.e., discoloration of affected parts or loose attachments) in accordance with McDonnell Douglas Alert Service Bulletin MD11-24A160, dated August 30, 1999; or Revision 01, dated November 11, 1999.

NOTE 2: For the purposes of this AD, a general visual inspection is defined as: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light, and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

(1) If no damage is detected during any inspection required by this AD, repeat the general visual inspection thereafter at intervals not to exceed 600 flight hours.

(2) If any damage is detected during any inspection required by this AD, prior to further flight, replace the power feeder cables, fuseholder, and/or fuses, as applicable, in accordance with the service bulletin. Repeat the general visual inspection thereafter at intervals not to exceed 600 flight hours.

Alternative Methods of Compliance

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate.

Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

Special Flight Permits

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(d) The actions shall be done in accordance with McDonnell Douglas Alert Service Bulletin MD11-24A160, dated August 30, 1999; or McDonnell Douglas Alert Service Bulletin MD11-24A160, Revision 01, dated November 11, 1999. The incorporation by reference was approved previously by the Director of the Federal Register as of January 4, 2000 (64 FR 71001, December 20, 1999). Copies may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Technical Publications Business Administration, Dept. C1-L51 (2-0). Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(e) The effective date of this amendment remains January 4, 2000.

FOR FURTHER INFORMATION CONTACT:

Brett Portwood, Aerospace Engineer, Systems and Equipment Branch, ANM-130L, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5350; fax (562) 627-5210.

Issued in Renton, Washington, on January 26, 2000.

Donald L. Riggins, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service

**BRITISH AEROSPACE REGIONAL AIRCRAFT
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-05 BRITISH AEROSPACE REGIONAL AIRCRAFT [Formerly Jetstream Aircraft Limited; British Aerospace (Commercial Aircraft) Limited]: Amendment 39-11524. Docket 99-NM-306-AD. Supersedes AD 98-24-01, Amendment 39-10888.

Applicability: Jetstream Model 4101 airplanes, on which British Aerospace Modification JM41384 has not been accomplished, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To detect and correct failure of the two diaphragms that support the upper structure of the forward equipment compartment, which could accelerate fatigue damage in adjacent structure and result in reduced structural integrity of the airframe, accomplish the following:

RESTATEMENT OF CERTAIN REQUIREMENTS OF AD 98-24-01:

(a) For airplanes having constructors numbers 41004 through 41098 inclusive: Prior to the accumulation of 4,500 total landings, or within 300 landings after December 23, 1998 (the effective date of AD 98-24-01, amendment 39-10888), whichever occurs later: Perform a detailed visual inspection to detect cracking or other damage of the diaphragms installed between station 4 and station 8 of the forward fuselage, in accordance with Jetstream Alert Service Bulletin J41-A53-023, dated December 2, 1996, or Revision 1, dated July 30, 1999.

NOTE 2: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

(1) If no cracking or other damage is detected, repeat the inspection thereafter at intervals not to exceed 3,000 landings.

(2) If any cracking or other damage is detected, prior to further flight, accomplish the actions required by either paragraph (a)(2)(i) or (a)(2)(ii). After the effective date of this AD, only replacement of the diaphragms in accordance with paragraph (a)(2)(ii) of this AD is acceptable for compliance with the repair requirements of this paragraph.

(i) Repair the diaphragm in accordance with a method approved by the Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate. Thereafter, repeat the inspection at intervals not to exceed 3,000 landings.

(ii) Replace both diaphragms with new, improved diaphragms, in accordance with Part 2 of the Accomplishment Instructions of Jetstream Alert Service Bulletin J41-A53-023, Revision 1, dated July 30, 1999. Such replacement constitutes terminating action for the repetitive inspections required by this AD.

NEW REPETITIVE INSPECTIONS AND CORRECTIVE ACTIONS REQUIRED BY THIS AD:

(b) For airplanes other than those listed in paragraph (a) of this AD: Prior to the accumulation of 4,500 total landings, or within 300 landings after the effective date of this AD, whichever occurs later, perform a detailed visual inspection to detect cracking or other damage of the diaphragms installed between station 4 and station 8 of the forward fuselage, in accordance with Jetstream Alert Service Bulletin J41-A53-023, Revision 1, dated July 30, 1999.

(1) If no cracking or other damage is detected, repeat the inspection thereafter at intervals not to exceed 3,000 landings.

(2) If any cracking or other damage is detected, prior to further flight, replace both diaphragms with new, improved diaphragms, in accordance with Part 2 of the Accomplishment Instructions of Jetstream Alert Service Bulletin J41-A53-023, Revision 1, dated July 30, 1999. Such replacement constitutes terminating action for the repetitive inspections required by this AD.

(c) Replacement of diaphragms with new, improved diaphragms, in accordance with Part 2 of the Accomplishment Instructions of Jetstream Alert Service Bulletin J41-A53-023, Revision 1, dated July 30, 1999, constitutes terminating action for the requirements of this AD.

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, International Branch, ANM-116.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the International Branch, ANM-116.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(f) Except as provided by paragraph (a)(2)(i) of this AD, the actions shall be done in accordance with Jetstream Alert Service Bulletin J41-A53-023, dated December 2, 1996, or Jetstream Alert Service Bulletin J41-A53-023, Revision 1, dated July 30, 1999.

(1) The incorporation by reference of Jetstream Alert Service Bulletin J41-A53-023, Revision 1, dated July 30, 1999, is approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1CFR part 51.

(2) The incorporation by reference of Jetstream Alert Service Bulletin J41-A53-023, dated December 2, 1996, was approved previously by the Director of the Federal Register as of December 23, 1998 (63 FR 63975, November 18, 1998).

(3) Copies may be obtained from British Aerospace Regional Aircraft American Support, 13850 Mclearen Road, Herndon, Virginia 20171. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(g) This amendment becomes effective on March 2, 2000.

FOR FURTHER INFORMATION CONTACT:

Norman B. Martenson, Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2110; fax (425) 227-1149.

Issued in Renton, Washington, on January 19, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**BOMBARDIER, INC.
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-06 BOMBARDIER, INC. (Formerly de Havilland, Inc.): Amendment 39-11525. Docket 2000-NM-08-AD.

Applicability: Model DHC-8-100, -200, and -300 series airplanes; serial numbers 003 through 538 inclusive; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (b) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent loss of the automatic overspeed protection of the propeller control system, which could result in a propeller overspeed condition and possible damage to the engine and propeller, accomplish the following:

(a) Within 50 flight hours after the effective date of this AD, perform a one-time visual inspection to determine the part numbers of the beta back-up test switches of the propeller control system, in accordance with de Havilland Alert Service Bulletin S.B. A8-61-30, Revision 'B,' dated December 6, 1999.

(1) If all switches have the correct part number (as specified by the alert service bulletin), no further action is required by this AD.

(2) If any switch does not have the correct part number (as specified by the alert service bulletin), prior to further flight, remove and replace the switch with a new switch having part number MS27407-6, in accordance with the alert service bulletin.

Alternative Methods of Compliance

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office (ACO), FAA, Engine and Propeller Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, New York ACO.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the New York ACO.

Special Flight Permits

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(d) The actions shall be done in accordance with de Havilland Alert Service Bulletin S.B. A8-61-30, Revision 'B,' dated December 6, 1999. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Bombardier, Inc., Bombardier Regional Aircraft Division, 123 Garratt Boulevard, Downsview, Ontario M3K 1Y5, Canada. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Engine and Propeller Directorate, New York Aircraft Certification Office, 10 Fifth Street, Third Floor, Valley Stream, New York; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

NOTE 3: The subject of this AD is addressed in Canadian airworthiness directive CF-99-30, dated December 9, 1999.

(e) This amendment becomes effective on February 16, 2000.

FOR FURTHER INFORMATION CONTACT:

James E. Delisio, Aerospace Engineer, Airframe and Propulsion Branch, ANE-171, FAA, Engine and Propeller Directorate, New York Aircraft Certification Office, 10 Fifth Street, Third Floor, Valley Stream, New York 11581; telephone (516) 256-7521; fax (516) 568-2716.

Issued in Renton, Washington, on January 21, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**BOMBARDIER, INC.
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-07 BOMBARDIER, INC. (Formerly de Havilland, Inc.): Amendment 39-11526. Docket 99-NM-107-AD.

Applicability: All Model DHC-7-100 series airplanes, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To detect and correct fatigue cracking in the baggage door fittings and the support structure, which could result in structural failure, and consequent rapid decompression of the airplane during flight, accomplish the following:

Repetitive Inspections

(a) At the latest of the times specified in paragraphs (a)(1) and (a)(2) of this AD, perform a high frequency eddy current inspection to detect fatigue cracks of the locking pin fittings of the baggage door and locking pin housings of the fuselage; and a detailed visual inspection to detect fatigue cracks of the inner door structure on all four locking attachment fittings of the baggage door; in accordance with de Havilland Temporary Revision (TR) 5-100, dated December 23, 1998, for Supplementary Inspection Task 52-1 to the de Havilland Dash 7 Maintenance Manual PSM 1-7-2. Thereafter, repeat the inspections at intervals not to exceed 1,000 flight cycles.

(1) Inspect prior to the accumulation of 12,000 total flight cycles.

(2) Inspect within 600 flight cycles or 3 months after the effective date of this AD, whichever occurs later.

NOTE 2: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

Corrective Actions

(b) If any crack is detected during any inspection required by paragraph (a) of this AD, prior to further flight, accomplish the requirements of paragraphs (b)(1) and (b)(2) of this AD, as applicable, except as provided in paragraph (c) of this AD. For operators that elect to accomplish the actions specified in paragraph (c) of this AD: After accomplishment of the replacement required by paragraph (b)(1) or (b)(2) of this AD, the AFM revision and placard required by paragraph (c) of this AD may be removed.

(1) If a crack is detected in a baggage door locking pin fitting or fuselage locking pin housing: Replace the fitting or housing with a new fitting or housing, as applicable, in accordance with de Havilland Dash 7 Maintenance Manual PSM 1-7-2.

(2) If a crack is detected in the inner baggage door structure at the locking attachment fittings: Replace the structure with a new support structure in accordance with de Havilland Dash 7 Maintenance Manual PSM 1-7-2, or repair in accordance with a method approved by the Manager, New York Aircraft Certification Office (ACO), FAA, Engine and Propeller Directorate, or the Transport Canada Civil Aviation (or its delegated agent). For a repair method to be approved by the Manager, New York ACO, as required by this paragraph, the Manager's approval letter must specifically reference this AD.

(c) For airplanes on which only one baggage door stop fitting or its support structure is found cracked at one location, and on which the pressurization system "Dump" function is operational: Prior to further flight, accomplish the requirements of paragraphs (c)(1) and (c)(2) of this AD. Within 1,000 flight cycles after accomplishment of the requirements of paragraphs (c)(1) and (c)(2) of this AD, accomplish the requirements of paragraph (b)(1) or (b)(2) of this AD, as applicable.

(1) Revise the Limitations Section of the FAA-approved DHC-7 Airplane Flight Manual (AFM), PSM 1-71A-1A, to include the following statement. This AFM revision may be accomplished by inserting a copy of this AD into the AFM.

"Flight is restricted to unpressurized flight below 10,000 feet mean sea level (MSL). The airplane must be operated in accordance with DHC-7 AFM, PSM 1-71A-1A, Supplement 20."

(2) Install a placard on the cabin pressure control panel or in a prominent location that states the following:

"DO NOT PRESSURIZE THE AIRCRAFT

UNPRESSURIZED FLIGHT PERMITTED ONLY IN ACCORDANCE WITH DHC-7 AFM PSM 1-71A-1A, SUPPLEMENT

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FLIGHT ALTITUDE LIMITED TO 10,000 FEET MSL OR LESS."

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, New York ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the, New York ACO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(f) The inspections shall be done in accordance with de Havilland Temporary Revision 5-100, dated December 23, 1998. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Bombardier, Inc., Bombardier Regional Aircraft Division, 123 Garratt Boulevard, Downsview, Ontario M3K 1Y5, Canada. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Engine and Propeller Directorate, New York Aircraft Certification Office, 10 Fifth Street, Third Floor, Valley Stream, New York; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

NOTE 4: The subject of this AD is addressed in Canadian airworthiness directive CF-99-03, dated February 22, 1999.

(g) This amendment becomes effective on March 2, 2000.

FOR FURTHER INFORMATION CONTACT:

Franco Pieri, Aerospace Engineer, Airframe and Propulsion Branch, ANE-171, FAA, Engine and Propeller Directorate, New York Aircraft Certification Office, 10 Fifth Street, Third Floor, Valley Stream, New York 11581; telephone (516) 256-7526; fax (516) 568-2716.

Issued in Renton, Washington, on January 20, 2000.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**DORNIER LUFTFAHRT GMBH
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-08 DORNIER LUFTFAHRT GMBH: Amendment 39-11527. Docket 99-NM-219-AD.

Applicability: Model 328-100 series airplanes, equipped with ground spoiler actuators having part number 1059A0000-02, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent hydraulic fluid leakage due to loose or broken gland attachment bolts, and consequent loss of the main hydraulic system, accomplish the following:

Replacement

(a) Prior to the accumulation of 3,300 total flight hours, or within 330 flight hours after the effective date of this AD, whichever occurs later, remove the four gland attachment bolts of the ground spoiler actuator and replace with new bolts installed at a higher torque, in accordance with Dornier Service Bulletin SB-328-27-289, dated March 3, 1999.

NOTE 2: Dornier Service Bulletin SB-328-27-289, dated March 3, 1999, refers to Liebherr Service Bulletin 1059A-27-01, dated March 5, 1999, as an additional source of service information for accomplishment of the replacement.

Spares

(b) As of the effective date of this AD, no person shall install, on any airplane, a ground spoiler actuator having part number 1059A0000-02, unless it has been modified in accordance with Dornier Service Bulletin SB-328-27-289, dated March 3, 1999.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, International Branch, ANM-116.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the International Branch, ANM-116.

Special Flight Permits

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(e) The replacement shall be done in accordance with Dornier Service Bulletin SB-328-27-289, dated March 3, 1999. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from FAIRCHILD DORNIER, DORNIER Luftfahrt GmbH, P.O. Box 1103, D-82230 Wessling, Germany. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

NOTE 4: The subject of this AD is addressed in German airworthiness directive 1999-175, dated June 3, 1999.

(f) This amendment becomes effective on March 2, 2000.

FOR FURTHER INFORMATION CONTACT:

Norman B. Martenson, Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2110; fax (425) 227-1149.

Issued in Renton, Washington, on January 20, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**THE BOEING COMPANY
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-10 BOEING: Amendment 39-11529. Docket 98-NM-282-AD.

Applicability: Model 747 series airplanes, as listed in Boeing Alert Service Bulletin 747-53A2416, Revision 1, dated May 6, 1999; certificated in any category.

NOTE 1: This AD also applies to airplanes that have been converted from a passenger configuration to a special freighter configuration.

NOTE 2: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To detect and correct cracking of the inner chord and web of the body station 1265 edge frame between stringers 23 and 27, which could result in rapid depressurization of the airplane, accomplish the following:

Inspections

(a) Accomplish the flight safety inspections of the frames at the floor intercostal to detect any broken fasteners and cracking of structure, in accordance with Figure 5 of Boeing Alert Service Bulletin 747-53A2416, Revision 1, dated May 6, 1999, at the applicable time specified in paragraph (a)(1), (a)(2), or (a)(3) of this AD. Repeat the inspection thereafter at intervals not to exceed 3,000 flight cycles.

NOTE 3: Accomplishment of the flight safety inspections of the frames at the floor intercostal on Group 2 airplanes prior to the effective date of this AD, in accordance with Boeing Alert Service Bulletin 747-53A2416, dated April 23, 1998, is considered acceptable for compliance with the actions required by paragraph (a) of this AD. However, Group 1 airplanes, as specified by paragraph (b) of this AD, that were inspected in accordance with the original release of the alert service bulletin are not exempt from the requirements of paragraph (b) of this AD.

NOTE 4: Figure 5 of the alert service bulletin includes a detailed visual inspection for broken fasteners, an open hole high frequency eddy current (HFEC) inspection of certain fastener holes in the frame inner chord to detect any cracking of structure, and a surface HFEC inspection of the frame web to detect any cracking.

NOTE 5: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

NOTE 6: The alert service bulletin gives instructions to perform an open hole inspection, but does not give instructions to oversize the fastener hole after the inspection. This will keep sufficient material to oversize the hole at a later date when the modification work is accomplished.

(1) For airplanes that have accumulated fewer than 10,000 total flight cycles as of the effective date of this AD: Inspect prior to the accumulation of 10,000 total flight cycles, or within 1,000 flight cycles after the effective date of this AD, whichever occurs later.

(2) For airplanes that have accumulated between 10,000 and 20,000 total flight cycles as of the effective date of this AD: Inspect prior to the accumulation of 11,000 total flight cycles, or within 750 flight cycles after the effective date of this AD, whichever occurs later.

(3) For airplanes that have accumulated more than 20,000 total flight cycles as of the effective date of this AD: Inspect prior to the accumulation of 20,750 total flight cycles, or within 500 flight cycles after the effective date of this AD, whichever occurs later.

(b) For Group 1 airplanes, as identified in Boeing Alert Service Bulletin 747-53A2416, Revision 1, dated May 6, 1999, on which the extended chord reinforcement strap modification specified in Boeing Service Bulletin 747-53-2066, dated June 28, 1972, has not been accomplished or on which the extended chord reinforcement strap modification was accomplished after the accumulation of 10,000 total flight cycles:

Accomplish the surface HFEC inspection and the open hole HFEC inspection, as applicable, of the frames at the top of the inner chord reinforcement strap to detect any cracking of structure, in accordance with Figure 6 of the alert service bulletin at the applicable time specified in either paragraph (b)(1) or (b)(2) of this AD. Repeat the inspections thereafter at intervals not to exceed 800 flight cycles.

(1) For airplanes that have accumulated 20,000 total flight cycles or fewer as of the effective date of this AD: Inspect prior to the accumulation of 16,000 total flight cycles, or within 500 flight cycles after the effective date of this AD, whichever occurs later.

(2) For airplanes that have accumulated more than 20,000 total flight cycles as of the effective date of this AD: Inspect prior to the accumulation of 20,500 total flight cycles, or within 250 flight cycles after the effective date of this AD, whichever occurs later.

Repair

(c) **If any broken fastener or cracking of structure is detected during the inspections required by paragraph (a) or (b) of this AD, prior to further flight, repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate; or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative who has been authorized by the Manager, Seattle ACO, to make such findings. For a repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the Manager's approval letter must specifically reference this AD.**

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 7: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(f) The inspections shall be done in accordance with Boeing Alert Service Bulletin 747-53A2416, Revision 1, dated May 6, 1999. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(g) This amendment becomes effective on March 7, 2000.

FOR FURTHER INFORMATION CONTACT:

Rick Kawaguchi, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1153; fax(425) 227-2771.

Issued in Renton, Washington, on January 20, 2000.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**THE BOEING COMPANY
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-11 BOEING: Amendment 39-11530. Docket 98-NM-374-AD.

Applicability: Model 777-200 series airplanes, as listed in Boeing Service Bulletin 777-57-0033, including Appendix A, both dated March 26, 1998, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (b) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent fuel or fuel vapors from entering the passenger and cargo compartments of the airplane in the event of a failure of the primary seal or development of a crack in the wing center section structure, accomplish the following:

Corrective Actions

(a) Within 24 months after the effective date of this AD, apply sealant to the upper surface on the wing center section under the overwing stub beams on the left and right sides of the airplane, in accordance with Boeing Service Bulletin 777-57-0033, dated March 26, 1998.

Alternative Methods of Compliance

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(d) The actions shall be done in accordance with Boeing Service Bulletin 777-57-0033, dated March 26, 1998, including Appendix A, dated March 26, 1998. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle Washington, 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(e) This amendment becomes effective on March 2, 2000.

FOR FURTHER INFORMATION CONTACT:

Larry Reising, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2683; fax (425) 227-1181.

Issued in Renton, Washington, on January 20, 2000

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**RAYTHEON AIRCRAFT COMPANY
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-15 RAYTHEON AIRCRAFT COMPANY (Type Certificate 3A20 previously held by the Beech Aircraft Corporation): Amendment 39-11533; Docket No. 99-CE-92-AD.

(a) What airplanes are affected by this AD?: Any Model 65-90, 65-A90, B90, and C90 airplane (all serial numbers) that:

(1) Has at least one Motorlet, Walter M601E-11 turboprop engine (with an Avia-Hamilton Standard VJ8-510 propeller) installed, in accordance with Supplemental Type Certificate (STC) SA01366AT; and

(2) Is certificated in any category.

(b) Who must comply with this AD?: Anyone who wishes to operate any of the above airplanes on the U.S. Register.

(c) What problem does this AD address?: The actions required by this AD will prevent engine failure and the inability to feather the propeller caused by discrepancies in the engine and propeller installation.

(d) What must I do to address this problem?: To address this problem, you must accomplish the following actions:

(1) Do not operate any airplane that has a Motorlet, Walter M601E-11 turboprop engine (with an Avia-Hamilton Standard VJ8-510 propeller) installed, in accordance with STC SA01366AT.

(2) Do not install, on any affected airplane, any Motorlet, Walter M601E-11 turboprop engine (with an Avia-Hamilton Standard VJ8-510 propeller), in accordance with STC SA01366AT.

(e) What is the compliance time of all actions of this AD?: As of the effective date of this AD.

(f) Can I comply with this AD in any other way?: Yes.

(1) You may use an alternative method of compliance or adjust the compliance time if:

(i) Your alternative method of compliance provides an equivalent level of safety; and

(ii) The Manager, Atlanta Aircraft Certification Office (ACO), approves your alternative.

Submit your request through an FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

(2) This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (f)(1) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if you have not eliminated the unsafe condition, specific actions you propose to address it.

(g) Where can I get information about any already-approved alternative methods of compliance?: Contact Robert Bosak, Aerospace Engineer, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, Suite 450, Atlanta, Georgia 30349; telephone: (770) 703-6094; facsimile: (770) 703-6097.

(h) What if I need to fly the airplane to another location to comply with this AD?: The FAA has determined that the nature of the unsafe condition does not warrant the issuance of a special flight permit under sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate your airplane to a location where you can accomplish the requirements of this AD. The only 2 airplanes that currently incorporate the configuration of the affected STC were involved in the referenced incidents. The engines of these airplanes will be replaced in accordance with the original type certificate data sheet (TCDS) or other FAA-approved STC. Basically, this AD prevents future installation of the configuration specified in STC SA01366AT.

(i) When does this amendment become effective?: This amendment becomes effective on February 18, 2000.

FOR FURTHER INFORMATION CONTACT:

Robert Bosak, Aerospace Engineer, FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, Suite 450, Atlanta, Georgia 30349; telephone: (770) 703-6094; facsimile: (770) 703-6097.

Issued in Kansas City, Missouri, on January 20, 2000.

Michael Gallagher, Manager, Small Airplane Directorate, Aircraft Certification Service.

**ROLLS-ROYCE PLC
AIRWORTHINESS DIRECTIVE
ENGINE
LARGE AIRCRAFT**

2000-02-17 Rolls-Royce plc: Amendment 39-11535. Docket 99-NE-60-AD.

Applicability: Rolls-Royce plc (R-R) RB211 Trent Rolls-Royce plc (R-R) RB211 Trent 768-60, 772-60, and 772B-60 series turbofan engines, installed on but not limited to Airbus Industrie A330-341 and A330-342 series airplanes.

Note 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent intermediate pressure turbine (IPT) and intermediate pressure compressor (IPC) shaft spline flank wear, which could result in loss of drive between the IPT and IPC, leading to an IPT overspeed and possible disk burst, uncontained engine failure, and potential damage to the aircraft, accomplish the following:

Inspections

(a) Visually inspect for flank wear on IPT shaft splines and intermediate pressure compressor IPC rear stub shaft splines in accordance with Paragraph D, Action, of R-R Mandatory Service Bulletin (SB) No. RB.211-72-C329, Revision 1, dated November 6, 1998, as follows:

- (1) Initially inspect prior to accumulating 4,200 cycles-since-new.
- (2) Thereafter, inspect at intervals not to exceed 4,200 cycles-in-service since last inspection.

Replacement, If Necessary

(b) If spline wear depth exceeds the limits referred to in paragraph D (h)(vi) of R-R Mandatory SB No. RB.211-72-C329, Revision 1, dated November 6, 1998, prior to further flight remove from service worn components and replace with serviceable parts.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office (ECO). Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, ECO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the ECO.

Ferry Flights

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the aircraft to a location where the inspection requirements of this AD can be accomplished.

Incorporation by Reference

(e) The actions required by this AD shall be performed in accordance with Mandatory SB No. RB.211-72-C329, Revision 1, dated November 6, 1998. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Rolls-Royce plc, PO Box 31, Derby, England; telephone: International Access Code 011, Country Code 44, 1332-249428, fax: International Access Code 011, Country Code 44, 1332-249223. Copies may be inspected at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

(f) This amendment becomes effective on February 16, 2000.

FOR FURTHER INFORMATION CONTACT: James Lawrence, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone 781-238-7176, fax 781-238-7199.

Issued in Burlington, Massachusetts, on January 21, 2000.

David A. Downey, Assistant Manager, Engine and Propeller Directorate, Aircraft Certification Service.

**THE BOEING COMPANY
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-18 BOEING: Amendment 39-11536. Docket 97-NM-133-AD. Supersedes AD 97-09-14, Amendment 39-10010.

Applicability: Model 737-100, -200, -300, -400, and -500 series airplanes; certificated in any category; equipped with:

- a rudder power control unit (PCU), having part number (P/N) 65-44861-(), P/N 65C37052-(), or P/N 65C37053-(), except those having a serial number of 1252A or greater or having a serial number that contains "ss"; or
- an aileron or elevator PCU having P/N 65-44761-(), except those having a serial number of 5360A or greater or having a serial number that contains "ss."

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (g)(1) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent a reduced rate of movement of the elevator, aileron, or rudder, which, if not corrected, could result in reduced controllability of the airplane, accomplish the following:

PARTIAL RESTATEMENT OF REQUIREMENTS OF AD 97-09-14:

(a) Within 5 years or 15,000 flight hours after June 6, 1997 (the effective date of AD 97-09-14, amendment 39-10010), or at the next time the PCU is sent to a repair facility, whichever occurs first: Perform an inspection of aileron and elevator PCU's having P/N 65-44761-(), except those having a serial number of 5360A or greater or having a serial number that contains "ss"; and rudder PCU's having P/N 65-44861-(), except those having a serial number of 1252A or greater or having a serial number that contains "ss"; to determine whether a PCU manifold has a reworked or repaired cylinder bore(s) containing chrome plating. Accomplish this inspection as specified in paragraph (a)(1), (a)(2), or (a)(3) of this AD.

(1) Inspect the airplane maintenance records to determine whether a PCU with a chrome-plate-repaired cylinder bore is installed. If inspection of the maintenance records shows that the PCU meets one of the criteria specified in paragraph (a)(1)(i), (a)(1)(ii), (a)(1)(iii), or (a)(1)(iv) of this AD, no further action is required by this AD for that PCU.

(i) The PCU has never been reworked or repaired.

NOTE 2: Chrome plating of the cylinder bores was limited to repair and was not used for new manufacture of PCU's or replacement manifolds.

(ii) The PCU has been reworked or repaired, but chrome plating was not used as the means of PCU cylinder bore repair.

(iii) The PCU has been reworked or repaired, but a manifold manufactured after December 31, 1985, was used to replace the cylinder bore.

NOTE 3: No PCU manifold manufactured after December 31, 1985, was reworked or repaired using chrome plating.

(iv) The PCU has been reworked or repaired using chrome plating of the cylinder bore, but the cylinder bore has subsequently been reworked to remove the chrome plating using the cylinder bore oversize method or steel sleeve method specified in Boeing Service Letter 737-SL-27-30, "Aileron/Elevator and Rudder Power Control Unit Cylinder Bore Rework," dated April 1, 1985.

(2) Inspect the PCU to determine whether the PCU is marked with vibroengraved text "737-SL-27-30" as evidence of prior inspection, as specified in Boeing Service Letter 737-SL-27-120, "Aileron, Elevator, and Rudder Power Control Unit Cylinder Bore Material Identification Method," dated January 28, 1998.

(3) Perform the PCU Non-Destructive Test (NDT) in accordance with Boeing Service Letter 737-SL-27-120, dated January 28, 1998, to determine whether chrome plating exists on the cylinder bore surface.
Replacement Required by AD 97-09-14

(b) If any reworked PCU manifold cylinder bores containing chrome plating are found to be installed during the inspection required by paragraph (a) of this AD: Prior to further flight, accomplish the actions specified in paragraph (b)(1), (b)(2), (b)(3), or (b)(4) of this AD, using as guidance the following procedures of the Boeing 737 Airplane Maintenance Manual, as applicable: Chapter 27-11-71 (for Model 737-100, -200, -300, -400, and -500 series airplanes), Chapter 27-31-101 (for Model 737-100 and -200 series airplanes), or Chapter 27-31-14 (for Model 737-300, -400, and -500 series airplanes), or equivalent procedures in the operator's FAA-approved maintenance program.

(1) Replace the PCU with a PCU with cylinder bores that were manufactured after December 31, 1985, or with a PCU with cylinder bores that have been reworked using the oversize method or the steel sleeve method specified in Boeing Service Letter 737-SL-27-30, dated April 1, 1985.

(2) Replace the aileron or elevator PCU with a PCU containing the letters "ss" in its serial number or with a PCU having a serial number of 5360A or higher.

(3) Replace the rudder PCU with a PCU containing the letters "ss" in its serial number or with a PCU having a serial number of 1252A or higher.

(4) Replace the PCU with a PCU for which paragraph (a) of this AD specifies that no further action is required.

Spares

(c) As of June 6, 1997, no person shall install a manifold cylinder bore containing chrome plating, or an aileron or elevator PCU having P/N 65-44761-() that has a manifold cylinder bore containing chrome plating, or a rudder PCU having P/N 65-44861-() that has a manifold cylinder bore containing chrome plating, on any airplane, unless the PCU is eligible as a replacement PCU, as specified in paragraph (b) of this AD.

NEW REQUIREMENTS OF THIS AD:

Inspection

(d) Within 5 years or 15,000 flight hours after the effective date of this AD, or at the next time the PCU is sent to a repair facility, whichever occurs first: Perform an inspection of any rudder PCU having P/N 65C37052-() or P/N 65C37053-(), except those having a serial number of 1252A or greater or having a serial number that contains "ss," to determine if the PCU manifold has a reworked or overhauled cylinder bore(s) containing chrome plating. Perform the inspection in accordance with paragraph (a)(1), (a)(2), or (a)(3) of this AD.

Replacement

(e) If any reworked or overhauled PCU manifold cylinder bores containing chrome plating are found to be installed during the inspection required by paragraph (d) of this AD: Prior to further flight, accomplish the actions specified in paragraph (e)(1), (e)(2), or (e)(3) of this AD, using, as guidance, procedures specified in Chapter 27-21-91 Boeing 737 Airplane Maintenance Manual (for Model 737-100, -200, -300, -400, and -500 series airplanes), or equivalent procedures in the operator's FAA-approved maintenance program.

(1) Replace the PCU with a PCU with cylinder bores that were manufactured after December 31, 1985, or with a PCU with cylinder bores that have been reworked using the oversize method or the steel sleeve method specified in Boeing Service Letter 737-SL-27-30, dated April 1, 1985.

(2) Replace the rudder PCU with a PCU containing the letters "ss" in its serial number or with a PCU having a serial number of 1252A or higher.

(3) Replace the rudder PCU with a rudder PCU for which paragraph (a) of this AD specifies that no further action is required.

Spares

(f) As of the effective date of this AD, no person shall install a rudder PCU having P/N 65C37052-() or P/N 65C37053-() that has a manifold cylinder bore containing chrome plating, on any airplane, unless the PCU is eligible as a replacement PCU per paragraph (e) of this AD.

Alternative Methods of Compliance

(g) (1) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

(2) Alternative methods of compliance, approved previously for AD 97-09-14, amendment 39-10010, are approved as alternative methods of compliance with this AD.

NOTE 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Manager, Seattle ACO.

Special Flight Permits

(h) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(i) The PCU NDT shall be done in accordance with Boeing Service Letter 737-SL-27-120, dated January 28, 1998. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(j) This amendment becomes effective on March 9, 2000.

FOR FURTHER INFORMATION CONTACT:

Don Kurle, Senior Engineer, Systems and Equipment Branch, ANM-130S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2798; fax (425) 227-1181.

Issued in Renton, Washington, on January 24, 2000

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**THE BOEING COMPANY
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-19 BOEING: Amendment 39-11537. Docket 97-NM-323-AD. Supersedes AD 90-02-16, Amendment 39-6452.

Applicability: Model 727 series airplanes, as listed in Boeing Service Bulletin 727-57-0177, dated December 22, 1988; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (g)(1) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent fatigue cracks of the front spar web of the center section of the wings, which could lead to fuel leakage and/or depressurization of the cabin, or to prevent fuel fumes in the cabin of the airplane, accomplish the following:

Repetitive Inspections

(a) For areas on which the front spar web between the upper and lower seals of the center section of the wings has not been repaired or modified in accordance with Figure 2 or 3 of Boeing Service Bulletin 727-57-0177, dated December 22, 1988; Revision 1, dated November 21, 1991; or Revision 2, dated September 16, 1993: Prior to the accumulation of 40,000 total flight cycles, or within the next 2,300 flight cycles after February 12, 1990 (effective date of AD 90-02-16, amendment 39-6452), whichever occurs later, unless accomplished within the last 700 flight cycles, accomplish the requirements of either paragraph (a)(1) or (a)(2) of this AD.

(1) Perform a detailed visual inspection to detect cracks in the front spar web, in accordance with Figure 1 of Boeing Service Bulletin 727-57-0177, dated December 22, 1988; Revision 1, dated November 21, 1991; Revision 2, dated September 16, 1993; Revision 3, dated February 15, 1996; or Revision 4, dated October 28, 1999. Repeat the detailed visual inspection thereafter at intervals not to exceed 3,000 flight cycles, until accomplishment of the requirements specified in either paragraph (b) or (c) of this AD.

NOTE 2: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

(2) Perform a high frequency eddy current (HFEC) inspection to detect cracks in the front spar web, in accordance with Boeing Service Bulletin 727-57-0177, Revision 4, dated October 28, 1999. Repeat the HFEC inspection thereafter at intervals not to exceed 4,500 flight cycles, until accomplishment of the requirements specified in either paragraph (b) or (c) of this AD.

NOTE 3: Accomplishment of the high frequency eddy current (HFEC) inspection required by AD 90-02-16, is considered acceptable for compliance with the initial detailed visual inspection required by paragraph (a) of this AD.

Repair of Cracks

(b) If any crack is detected during any inspection required by paragraph (a) of this AD, prior to further flight, accomplish the actions specified in either paragraph (b)(1) or (b)(2) of this AD, as applicable. Accomplishment of the repair constitutes terminating action for the repetitive inspection requirements of paragraph (a) of this AD for that repaired area.

(1) For airplanes equipped with integral fuel tanks in the center section of the wings: Repair in accordance with Figure 2 of Boeing Service Bulletin 727-57-0177, Revision 3, dated February 15, 1996; or Revision 4, dated October 28, 1999.

(2) For airplanes not equipped with integral fuel tanks in the center section of the wings: Repair in accordance with Figure 2 of Boeing Service Bulletin 727-57-0177, dated December 22, 1988, Revision 1, dated November 21, 1991; Revision 2, dated September 16, 1993; Revision 3, dated February 15, 1996; or Revision 4, dated October 28, 1999.

NOTE 4: Where there are differences between the referenced service bulletins and this AD, the AD prevails.

Modification

(c) Except as provided by paragraph (d) of this AD, prior to the accumulation of 60,000 total flight cycles, or within 48 months after the effective date of this AD, whichever occurs later, accomplish the actions specified in either paragraph (c)(1) or (c)(2) of this AD, as applicable. Accomplishment of this action constitutes terminating action for the repetitive inspection requirements of paragraph (a) of this AD.

(1) For airplanes equipped with integral fuel tanks in the center section of the wings: Modify the front spar web, between the upper and lower seals, of the center section of the wings, in accordance with Part I of the Accomplishment Instructions of Boeing Service Bulletin 727-57-0177, Revision 3, dated February 15, 1996; or Revision 4, dated October 28, 1999.

(2) For airplanes not equipped with integral fuel tanks in the center section of the wings: Modify the front spar web, between the upper and lower seals, of the center section of the wings, in accordance with Boeing Service Bulletin 727-57-0177, dated December 22, 1988, Revision 1, dated November 21, 1991; Revision 2, dated September 16, 1993; Revision 3, dated February 15, 1996; or Revision 4, dated October 28, 1999.

Repetitive Visual Inspections and Repair/Modification of the Front Spar Web

(d) For areas on which the front spar web between the upper and lower seals of the center section of the wings has been repaired or modified in accordance with Figure 2 or 3 of Boeing Service Bulletin 727-57-0177, dated December 22, 1988; Revision 1, dated November 21, 1991; or Revision 2, dated September 16, 1993: Accomplish the actions required by either paragraph (d)(1) or (d)(2) of this AD, as applicable.

(1) For airplanes not equipped with integral fuel tanks in the center section of the wings: No further action is required by this AD for those areas repaired or modified.

(2) For airplanes equipped with integral fuel tanks in the center section of the wings: Accomplish the actions required by both paragraphs (d)(2)(i) and (d)(2)(ii) of this AD.

(i) Within 500 flight cycles after the effective date of this AD, perform a detailed visual inspection of the front spar web to detect fuel leakage and penetrations in the secondary fuel barrier, and to verify the installation of the secondary fuel barrier; in accordance with Boeing Service Bulletin 727-57-0177, Revision 3, dated February 15, 1996; or Revision 4, dated October 28, 1999. Repeat the visual inspection thereafter at intervals not to exceed 1,500 flight cycles, until accomplishment of the actions required by paragraph (d)(2)(ii) of this AD.

(ii) Prior to the accumulation of 14,000 flight cycles, or within 96 months after the effective date of this AD, whichever occurs later, repair/modify the front spar web in accordance with Part II of the Accomplishment Instructions of Boeing Service Bulletin 727-57-0177, Revision 3, dated February 15, 1996; or Revision 4, dated October 28, 1999. Accomplishment of this action constitutes terminating action for the repetitive inspection requirements of paragraph (d)(2)(i) of this AD for that repaired/modified area.

Follow-on Corrective Action

(e) During any inspection required by paragraph (d)(2)(i) of this AD, if any fuel leakage or penetration in the secondary fuel barrier is detected, or if any secondary fuel barrier is verified as not being installed, prior to further flight, repair in accordance with Part II of the Accomplishment Instructions of Boeing Service Bulletin 727-57-0177, Revision 3, dated February 15, 1996; or Revision 4, dated October 28, 1999. Accomplishment of this action constitutes terminating action for the repetitive inspection requirements of paragraph (d)(2)(i) of this AD for that repaired area.

Terminating Action for AD 94-05-04

(f) Accomplishment of the actions required by paragraph (b), (c), (d)(2)(ii), or (e) of this AD constitutes terminating action for the requirements specified in paragraph (a) of AD 94-05-04, amendment 39-8842 (59 FR 13442, March 22, 1994), with respect to the modification specified in Boeing Service Bulletin 727-57-0177, dated December 22, 1988. This service bulletin is one of many service bulletins referenced in Boeing Document D6-54860, Revision G, Appendix A.3, dated March 5, 1993. All other service bulletins referenced in that document still apply.

Alternative Method of Compliance

(g) (1) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 5: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

(2) For airplanes not equipped with integral fuel tanks in the center section of the wings: Alternative methods of compliance, approved previously in accordance with AD 90-02-16, amendment 39-6452, are approved as alternative methods of compliance with this AD. For airplanes equipped with integral fuel tanks in the center section of the wings: Alternative methods of compliance, approved previously in accordance with AD 90-02-16, are NOT approved as alternative methods of compliance with this AD.

Special Flight Permits

(h) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(i) The actions shall be done in accordance with Boeing Service Bulletin 727-57-0177, dated December 22, 1988; Boeing Service Bulletin 727-57-0177, Revision 1, dated November 21, 1991; Boeing Service Bulletin 727-57-0177, Revision 2, dated September 16, 1993; Boeing Service Bulletin 727-57-0177, Revision 3, dated February 15, 1996; or Boeing Service Bulletin 727-57-0177, Revision 4, dated October 28, 1999; as applicable. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(j) This amendment becomes effective on March 9, 2000.

FOR FURTHER INFORMATION CONTACT:

Walter Sippel, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2774; fax (425) 227-1181.

Issued in Renton, Washington, on January 24, 2000.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**THE BOEING COMPANY
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-20 BOEING: Amendment 39-11538. Docket 98-NM-231-AD. Supersedes AD 95-13-12 R1, Amendment 39-9528.

Applicability: Model 767 series airplanes equipped with General Electric Model CF6-80C2 series engines, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (i)(1) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To ensure the integrity of the fail safe features of the thrust reverser system by preventing possible failure modes in the thrust reverser control system that can result in inadvertent deployment of a thrust reverser during flight, accomplish the following:

RESTATEMENT OF REQUIREMENTS OF AD 95-13-12 R1:

Repetitive Tests, Inspections, and Adjustments

(a) Within 30 days after August 18, 1995 (the effective date of AD 95-13-12 R1, amendment 39-9528), perform tests, inspections, and adjustments of the thrust reverser system in accordance with Boeing Service Bulletin 767-78-0047, Revision 3, dated July 28, 1994.

(1) Except as provided by paragraph (a)(2) of this AD, repeat all tests and inspections thereafter at intervals not to exceed 3,000 flight hours until the modification required by paragraph (c) of this AD is accomplished.

(2) Repeat the check of the grounding wire for the Directional Pilot Valve (DPV) of the thrust reverser in accordance with the service bulletin at intervals not to exceed 1,500 flight hours, and whenever maintenance action is taken that would disturb the DPV grounding circuit, until the modification required by paragraph (c) of this AD is accomplished.

Repair

(b) If any of the tests and/or inspections required by paragraph (a) of this AD cannot be successfully performed, or if those tests and/or inspections result in findings that are unacceptable in accordance with Boeing Service Bulletin 767-78-0047, Revision 3, dated July 28, 1994; accomplish paragraphs (b)(1) and (b)(2) of this AD.

(1) Prior to further flight, deactivate the associated thrust reverser in accordance with Section 78-31-1 of Boeing Document D630T002, "Boeing 767 Dispatch Deviation Guide," Revision 9, dated May 1, 1991; or Revision 10, dated September 1, 1992. After August 18, 1995, this action shall be accomplished only in accordance with Revision 10 of the Boeing document. No more than one reverser on any airplane may be deactivated under the provisions of this paragraph.

(2) Within 10 days after deactivation of any thrust reverser in accordance with this paragraph, the thrust reverser must be repaired in accordance with Boeing Service Bulletin 767-78-0047, Revision 3, dated July 28, 1994. Additionally, the tests and/or inspections required by paragraph (a) of this AD must be successfully accomplished; once this is accomplished, the thrust reverser must then be reactivated.

Modification

(c) For airplanes having line numbers 1 through 474 inclusive: Within 3 years after August 18, 1995, install a third locking system on the left- and right-hand engine thrust reversers in accordance with Boeing Service Bulletin 767-78-0063, Revision 2, dated April 28, 1994.

NEW REQUIREMENTS OF THIS AD:

NOTE 2: Model 767 series airplanes equipped with General Electric Model CF6-80C2 series engines and having line numbers 475 and subsequent, on which Production Revision Record (PRR) B11481-70 (which installs a third locking system on the left- and right-hand engine thrust reversers) has been incorporated, need NOT be modified in accordance with Boeing Service Bulletin 767-78-0063, Revision 2.

NOTE 3: Boeing Service Bulletin 767-78-0063, references General Electric (GE) Service Bulletin 78-135 as an additional source of service information for accomplishment of the third locking system on the thrust reversers. However, the Boeing Service Bulletin does not specify the appropriate revision level, and the GE service bulletin has a new Lockheed Martin title for the same service bulletin: Lockheed Martin Service Bulletin 78-135, Revision 4, dated September 30, 1996. The appropriate revision level for the GE Service Bulletin is Revision 3, dated August 2, 1994. The GE and Lockheed Martin service bulletins are identical, and either may be used for accomplishment of the action described previously.

NOTE 4: The actions specified in Lockheed Martin Service Bulletin 78-1007, Revision 1, dated March 18, 1997; and Lockheed Martin Service Bulletin 78-1020, Revision 2, dated March 20, 1997; may be accomplished simultaneously in conjunction with Boeing Service Bulletin 767-78-0063 for accomplishment of the installation of the thrust reverser bracket and the thrust reverser lock. (Accomplishment of these two service bulletins together achieves the same results as Lockheed Martin Service Bulletin 78-135, Revision 4, and is acceptable for compliance with Boeing Service Bulletin 767-78-0063.)

Repetitive Tests and Checks

(d) Perform a functional test to detect discrepancies of the cone brake of the center drive unit (CDU) on each thrust reverser, in accordance with Boeing Service Bulletin 767-78A0081, Revision 1, dated October 9, 1997, or Appendix 1

(including Figure 1), sections 1.A.(2), 2.A., 2.C., and 2.D of this AD. Accomplish the functional test at the time specified in paragraph (d)(1) or (d)(2) of this AD, as applicable.

(1) For airplanes on which the test required by paragraph (d) of AD 95-13-12 R1 has been accomplished prior to the effective date of this AD: Accomplish the functional test within 1,000 flight hours after the most recent test of the CDU cone brake performed in accordance with paragraph (d) of AD 95-13-12 R1, or within 650 flight hours after the effective date of this AD, whichever occurs later.

(2) For airplanes on which the test required by paragraph (d) of AD 95-13-12 R1 has NOT been accomplished prior to the effective date of this AD: Accomplish the functional test within 1,000 flight hours since the date of manufacture, or within 650 flight hours after the effective date of this AD, whichever occurs later.

(e) Repeat the functional test of the CDU cone brake specified in paragraph (d) of this AD at the time specified in paragraph (e)(1) or (e)(2) of this AD, as applicable.

(1) For Model 767 series airplanes, line numbers up to and including 474, equipped with thrust reversers that have not been modified in accordance with Boeing Service Bulletin 767-78-0063: Repeat the functional test of the CDU cone brake thereafter at intervals not to exceed 650 flight hours.

(2) For Model 767 series airplanes, line numbers 475 and subsequent; and Model 767 series airplanes equipped with thrust reversers that have been modified in accordance with Boeing Service Bulletin 767-78-0063: Repeat the functional test of the CDU cone brake thereafter at intervals not to exceed 1,000 flight hours.

(f) Within 1,000 flight hours after accomplishing the modification required by paragraph (c) of this AD or after the equivalent modification (Production Revision Record B11481-70) is incorporated in production, or within 1,000 flight hours after the effective date of this AD, whichever occurs later: Perform operational checks of the electro-mechanical brake in accordance with Appendix 1 (including Figure 1), sections 1.A.(1), 2.A., 2.B., and 2.D of this AD. Repeat the operational checks thereafter at intervals not to exceed 1,000 flight hours.

Repair

(g) If any functional test or operational check required by paragraph (d), (e), or (f) of this AD cannot be successfully performed, prior to further flight, repair in accordance with Boeing Service Bulletin 767-78A0081, Revision 1, dated October 9, 1997; or Appendix 1, section 2.B. and 2.C., of this AD; as applicable; and repeat the applicable test or check until successfully accomplished.

Terminating Action

(h) Accomplishment of the modification required by paragraph (c) or installation of an equivalent modification (Production Revision Record B11481-70) in production, and accomplishment of periodic operational checks required by paragraphs (d), (e), and (f) of this AD, constitutes terminating action for the tests, inspections, and adjustments required by paragraph (a) of this AD.

Alternative Methods of Compliance

(i) (1) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

(2) Alternative methods of compliance, approved previously in accordance with AD 95-13-12, amendment 39-9292, are approved as alternative methods of compliance with this AD.

NOTE 5: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(j) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(k) Except as provided by paragraphs (b), (d), and (e) of this AD, the actions shall be done in accordance with Boeing Service Bulletin 767-78-0047, Revision 3, dated July 28, 1994; Boeing Service Bulletin 767-78-0063, Revision 2, dated April 28, 1994; and Boeing Service Bulletin 767-78A0081, Revision 1, dated October 9, 1997; as applicable.

(1) The incorporation by reference of Boeing Service Bulletin 767-78A0081, Revision 1, dated October 9, 1997, is approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(2) The incorporation by reference of Boeing Service Bulletin 767-78-0047, Revision 3, dated July 28, 1994; and Boeing Service Bulletin 767-78-0063, Revision 2, dated April 28, 1994; was previously approved by the Director of the Federal Register, as of August 18, 1995 (60 FR 36976, July 19, 1995).

(3) Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

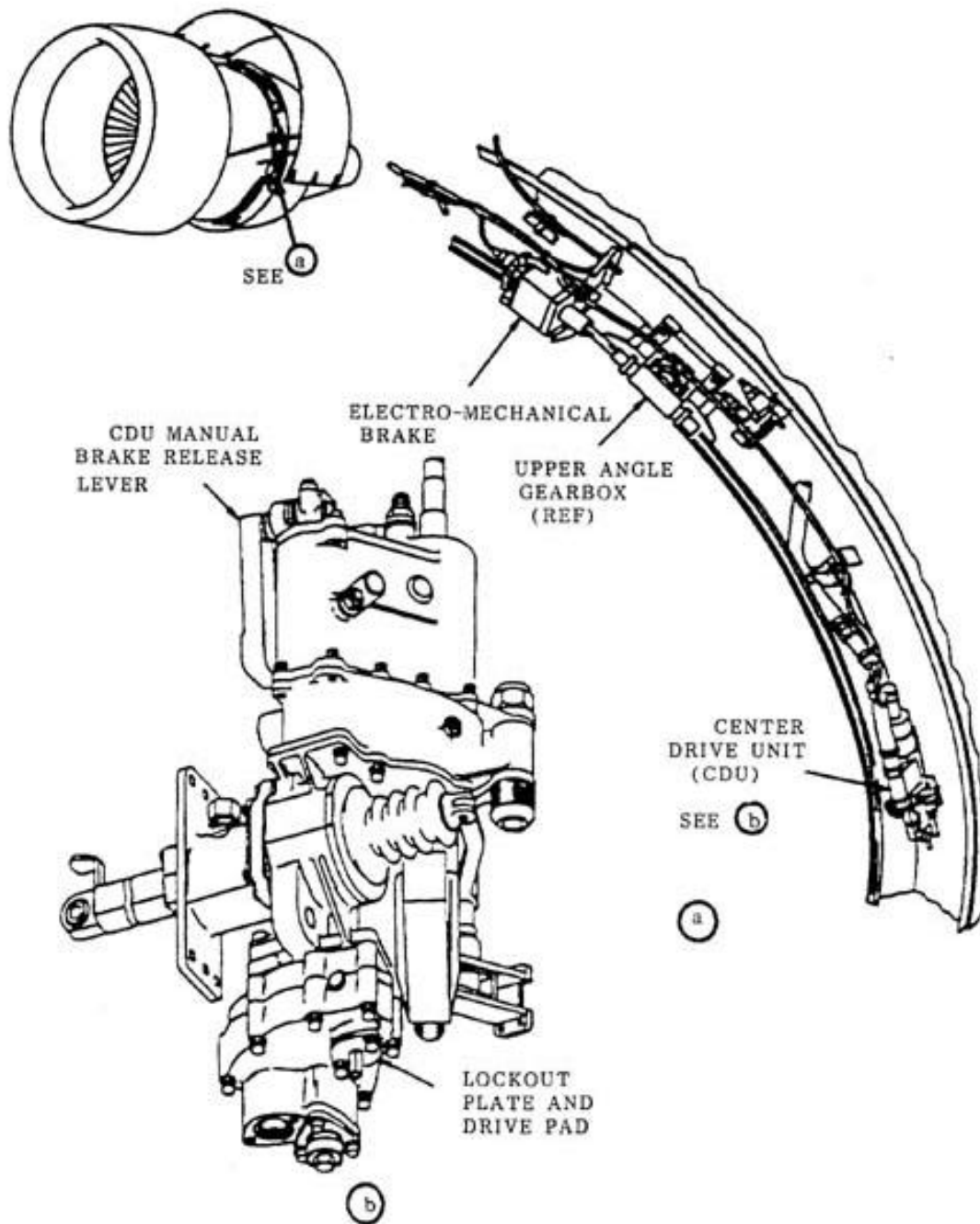
(l) This amendment becomes effective on March 9, 2000.

FOR FURTHER INFORMATION CONTACT:

Holly Thorson, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1357; fax (425) 227-1181. Issued in Renton, Washington, on January 24, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

To ensure the integrity of the fail-safe features of the thrust reverser system



Electro-Mechanical Brake and CDU Cone Brake Torque Check

Figure 1

APPENDIX 1**THRUST REVERSER ELECTRO-MECHANICAL BRAKE AND CDU CONE BRAKE TEST****1. General**

A. This procedure contains steps to do two checks:

- (1) A check of the holding torque of the electro-mechanical brake.
- (2) A check of the holding torque of the CDU cone brake.

2. Electro-Mechanical Brake and CDU Cone Brake Torque Check (Fig. 1)

A. Prepare to do the checks:

- (1) Open the fan cowl panels.

B. Do a check of the torque of the electro-mechanical brake:

- (1) Do a check of the running torque of the thrust reverser system:
 - (a) Manually extend the thrust reverser six inches and measure the running torque.
 - 1) Make sure the torque is less than 10 pound-inches.
- (2) Do a check of the electro-mechanical brake holding torque:
 - (a) Make sure the thrust reverser translating cowl is extended at least one inch.
 - (b) Make sure the CDU lock handle is released.
 - (c) Pull down on the manual release handle on the electro-mechanical brake until the handle fully engages the retaining clip.

NOTE: This will lock the electro-mechanical brake.

- (d) With the manual drive lockout cover removed from the CDU, install a 1/4-inch extension tool and dial-type torque wrench into the drive pad.

NOTE: You will need a 24-inch extension to provide adequate clearance for the torque wrench.

- (e) Apply 90 pound-inches of torque to the system.
 - 1) The electro-mechanical brake system is working correctly if the torque is reached before you turn the wrench 450 degrees (1-1/4 turns).
 - 2) If the flexshaft turns more than 450 degrees before you reach the specified torque, you must replace the long flexshaft between the CDU and the upper angle gearbox.
 - 3) If you do not get 90 pound-inches of torque, you must replace the electro-mechanical brake.
- (f) Release the torque by turning the wrench in the opposite direction until you read zero pound-inches.
 - 1) If the wrench does not return to within 30 degrees of initial starting point, you must replace the long flexshaft between the CDU and upper angle gearbox.
- (3) Fully retract the thrust reverser.

C. Do a check of the CDU cone brake:

(1) Pull up on the manual release handle to unlock the electro-mechanical brake.

- (2) Pull the manual brake release lever on the CDU to release the cone brake.

NOTE: This will release the pre-load tension that may occur during a stow cycle.

- (3) Return the manual brake release lever to the locked position to engage the cone brake.
- (4) Remove the two bolts that hold the lockout plate to the CDU and remove the lockout plate.
- (5) Install a 1/4-inch drive and a dial type torque wrench into the CDU drive pad.

CAUTION: DO NOT USE MORE THAN 100 POUND-INCHES OF TORQUE WHEN YOU DO THIS CHECK. EXCESSIVE TORQUE WILL DAMAGE THE CDU.

- (6) Turn the torque wrench to try to manually extend the translating cowl until you get at least 15-pound inches.

NOTE: The cone brake prevents movement in the extend direction only. If you try to measure the holding torque in the retract direction, you will get a false reading.

- (a) If the torque is less than 15-pound-inches, you must replace the CDU.

D. Return the airplane to its usual condition:

- (1) Fully retract the thrust reverser (unless already accomplished).
- (2) Pull down on the manual release handle on the electro-mechanical brake until the handle fully engages the retaining clip (unless already accomplished).

NOTE: This will lock the electro-mechanical brake.

- (3) Close the fan cowl panels.

**BRITISH AEROSPACE REGIONAL AIRCRAFT
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-21 BRITISH AEROSPACE REGIONAL AIRCRAFT [Formerly Jetstream Aircraft Limited; British Aerospace (Commercial Aircraft) Limited]: Amendment 39-11539. Docket 99-NM-309-AD.

Applicability: All Model Jetstream 4101 airplanes, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent fatigue failure of the towing bracket, which could cause a towing vehicle to collide into the propeller while the airplane engines are running, and consequently, could cause damage to the airplane, and injure ground personnel, flight crew, or passengers, accomplish the following:

Placard Installation

(a) Prior to the accumulation of 12,000 total landings on the shock strut of the nose landing gear (NLG), or within 5 days after the effective date of this AD, whichever occurs later: Except as provided by paragraph (b) of this AD, manufacture and install a placard on the left-hand instrument panel in the cockpit to prohibit push-backs with engines running, in accordance with Jetstream Alert Service Bulletin J41-11-024, dated May 11, 1999.

Repetitive Action

(b) In lieu of accomplishing the actions specified in paragraph (a) of this AD, at the time specified in paragraph (a) of this AD, vibro etch the serial number and date of installation on a new tow bracket sub-assembly; and install the new tow bracket sub-assembly, in accordance with Jetstream Service Bulletin J41-32-070, Revision 1, dated September 14, 1999. Repeat the vibro etch process and installation of a new sub-assembly thereafter at intervals not to exceed 12,000 landings on the shock strut of the NLG.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, International Branch, ANM-116.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the International Branch, ANM-116.

Special Flight Permits

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(e) The actions shall be done in accordance with Jetstream Alert Service Bulletin J41-11-024, dated May 11, 1999; or Jetstream Service Bulletin J41-32-070, Revision 1, dated September 14, 1999; as applicable. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from British Aerospace Regional Aircraft American Support, 13850 Mclearen Road, Herndon, Virginia 20171. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

NOTE 3: The subject of this AD is addressed in British airworthiness directive 004-05-99.

(f) This amendment becomes effective on March 9, 2000.

FOR FURTHER INFORMATION CONTACT:

Norman B. Martenson, Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2110; fax (425) 227-1149.

Issued in Renton, Washington, on January 24, 2000.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service

**THE BOEING COMPANY
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-22 BOEING: Amendment 39-11540. Docket 99-NM-76-AD.

Applicability: Model 747-400 series airplanes equipped with Rolls -Royce RB211-524G/H engines, and RB211-524G-T/H-T engines; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent inadvertent deployment of a thrust reverser during flight and consequent reduced controllability of the airplane, accomplish the following:

Modifications

(a) Accomplish the requirements of paragraphs (a)(1), (a)(2), and (a)(3) of this AD at the times specified in those paragraphs. Accomplishment of these actions, or installation of an additional locking system during production in accordance with production equivalent PRR 81000-39, constitutes terminating action for the inspections and tests required by paragraph (c) of AD 94-15-05, amendment 39-8976.

(1) Within 36 months after the effective date of this AD: Install an additional locking system on each engine thrust reverser in accordance with the Accomplishment Instructions of Boeing Service Bulletin 747-78-2158, Revision 2, dated July 29, 1999.

NOTE 2: Modifications accomplished prior to the effective date of this AD in accordance with Boeing Service Bulletin 747-78-2158, Revision 1, dated January 22, 1998; are considered acceptable for compliance with the applicable action specified in this amendment.

(2) Concurrent with the installation required by paragraph (a)(1) of this AD, accomplish the requirements of paragraphs (a)(2)(i) and (a)(2)(ii) of this AD.

(i) Accomplish the additional procedures for installation of an additional locking system on each engine thrust reverser in accordance with Rolls-Royce Service Bulletin RB.211-78-9601, Revision 5, dated February 20, 1998.

(ii) Install a thrust reverser translating cowl assembly seal support in accordance with Rolls-Royce Service Bulletin RB.211-78-B207, dated November 19, 1994.

(3) Prior to or concurrent with the installation required by paragraph (a)(1) of this AD, accomplish the requirements of paragraphs (a)(3)(i), (a)(3)(ii), (a)(3)(iii), and (a)(3)(iv) of this AD:

(i) Modify the fuel temperature indicating system in accordance with Boeing Service Bulletin 747-73-2052, Revision 1, dated April 23, 1992; and Rolls-Royce Service Bulletin RB.211-71-9043, dated May 4, 1990. Prior to or concurrent with accomplishment of Boeing Service Bulletin 747-73-2052, Revision 1: Modify the central maintenance computer system (CMCS) hardware and software in accordance with Boeing Service Bulletin 747-45-2007, dated March 29, 1990; and Boeing Service Bulletin 747-45-2016, Revision 1, dated May 2, 1996.

(ii) Install the provisional wiring for the locking system on the thrust reversers in accordance with Boeing Service Bulletin 747-78-2121, dated October 29, 1992; and 747-78-2157, Revision 2, dated November 26, 1997.

(iii) Modify the integrated display system (IDS) software in accordance with Boeing Service Bulletin 747-31-2246, dated May 2, 1996.

(iv) Install engine provisions to accommodate the installation of an additional locking system on each engine thrust reverser in accordance with Rolls-Royce Service Bulletin RB.211-71-9600, Revision 8, dated May 24, 1996; and RB.211-71-9608, Revision 3, dated April 18, 1997.

Repetitive Operational Checks

(b) Within 3,000 flight hours after accomplishing the requirements of paragraph (a) of this AD, or within 1,000 flight hours after the effective date of this AD, whichever occurs later: Perform operational checks of the number 2 and number 3 gearbox locks and of the air motor brake, in accordance with the procedures described in Appendix 1 (including Figure 1) of this AD. Repeat the operational checks thereafter at intervals not to exceed 3,000 flight hours.

Corrective Actions

(c) If any operational check required by paragraph (b) of this AD cannot be successfully performed as specified in the procedures described in Appendix 1 (including Figure 1) of this AD, or if any discrepancy is detected during any operational check, prior to further flight, repair in accordance with the procedures specified in the Boeing 747 Airplane Maintenance Manual. Additionally, prior to further flight, any failed operational check required by paragraph (b) of this AD must be repeated and successfully accomplished. Repeat the operational checks thereafter at intervals not to exceed 3,000 flight hours.

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(f) Except as provided by paragraphs (b), (c)(1), and (c)(2) of this AD, the actions shall be done in accordance with the applicable service bulletins, which contain the specified list of effective pages:

Service Bulletin Referenced and Date	Page Number Shown on Page	Revision Shown on Page Level	Date Shown on Page
Boeing 747-78-2157 Revision 2 November 26, 1997	1-151	2	November 26, 1997
Boeing 747-78-2158 Revision 2 July 29, 1999	1-344	2	July 29, 1999
Boeing 747-73-2052 Revision 1 April 23, 1992	1, 3-5, 8, 10, 15-17 2, 6-7, 9, 11-14, 18-41	1 Original	April 23, 1992 June 7, 1990
Boeing 747-31-2246 May 2, 1996	1-12	Original	May 2, 1996
Boeing 747-45-2016 Revision 1 May 2, 1996	1-33	1	May 2, 1996
Boeing 747-78-2121 October 29, 1992	1-20	Original	October 29, 1992
Boeing 747-45-2007 March 29, 1990	1-13	Original	March 29, 1990
Rolls-Royce RB.211-78-9601 Revision 5 February 20, 1998	1-4 5 6-21 1-3	5 2 Original 4	February 20, 1998 October 20, 1995 August 7, 1992 February 20, 1998
Rolls-Royce RB.211-71-9600 Revision 8 May 24, 1996	1, 71-72, 72A 2, 5-16, 18-32, 34-67, 73-77, 87-88 3 4 17, 33, 86 68-70, 78, 80-84 79, 85, 90-95 89 Supplement 1-5	8 2 7 6 4 Original 3 5 3	May 24, 1996 February 26, 1993 October 20, 1995 March 31, 1995 February 11, 1994 August 7, 1992 December 17, 1993 August 19, 1994 March 31, 1995

Service Bulletin Referenced and Date	Page Number Shown on Page	Revision Shown on Page Level	Date Shown on Page
Rolls-Royce RB.211-78-B207 November 19, 1994	1-15 Supplement 1	Original Original	November 19, 1994 November 19, 1994
Rolls-Royce RB.211-71-9608 Revision 3 April 18, 1997	1, 5 2-4, 6-18, 20-48 19 Supplement 1-3	3 Original 2 2	April 18, 1997 August 7, 1992 July 5, 1996 April 18, 1997
Rolls-Royce RB.211-71-9043 May 4, 1990	1-18 Supplement 1-2	Original Original	May 4, 1990 May 4, 1990

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

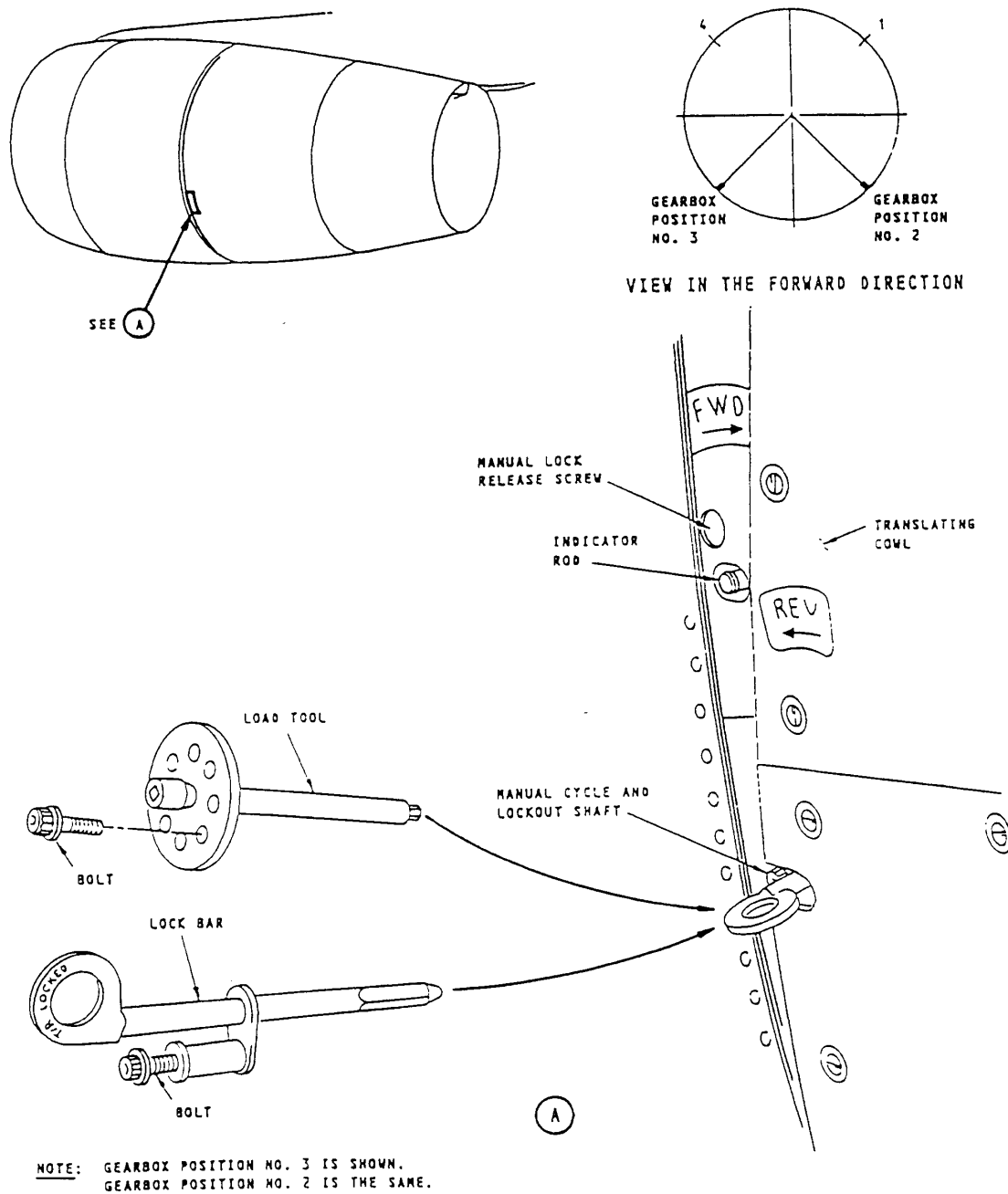
(g) This amendment becomes effective on February 18, 2000.

FOR FURTHER INFORMATION CONTACT:

Ed Hormel, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (206) 227-2681; fax(206) 227-1181.

Issued in Renton, Washington, on January 25, 2000.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.



Lock Bar/Load Tool Installation and Gearbox Manual Lock Release
Figure 1

APPENDIX 1

1. Gearbox Lock and Air Motor Brake Test

A. General

- (1) To do the test of the gearbox locks and air motor brake, you must do the steps that follow:
 - (a) Do the deactivation procedure of the thrust reverser system.
 - (b) Do the test of the air motor brake.
 - (c) Do the test of the gearbox locks.
 - (d) Do the activation procedure of the thrust reverser system.

B. Equipment

- (1) CP30784 - INA Access Platform, Rolls-Royce
- (2) CP30769 - Protection Pads, Rolls-Royce
- (3) CP30785 - Access Stools, Rolls-Royce
- (4) UT1293/1 - Load Tool, Rolls-Royce (2 required)

C. Procedure (Fig. 1).

WARNING: DO THE DEACTIVATION PROCEDURE OF THE THRUST REVERSER SYSTEM, WHICH MUST INCLUDE THE INSTALLATION OF LOCK BARS (OR BLOCKERS), TO PREVENT THE ACCIDENTAL OPERATION OF THE THRUST REVERSER. THE ACCIDENTAL OPERATION OF THE THRUST REVERSER COULD CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

- (1) Do the deactivation procedure of the thrust reverser in the forward thrust position for ground maintenance.
- (2) Use a 0.25 inch (6.4 mm) square drive to turn the manual lock release screw to release the No. 2 and No. 3 gearbox locks.

NOTE: It is not always easy to turn the manual lock release screws. This is because of a preload in the systems. To release the preload, lightly turn the manual cycle and lockout shafts in the stow direction.

- (a) Make sure the lock indicators are extended at gearboxes No. 2 and No. 3.
- (3) Do a test of the air motor brake:
 - (a) IF YOU USE THE LOAD TOOLS; Try to move the translating cowl in the extend direction as follows:
 - 1) Remove the lock bars that you installed in the deactivation procedure.
 - 2) Install the load tools through the cutouts and into the No. 2 and No. 3 gearboxes.
 - 3) Attach the torque wrenches to the load tools.
 - 4) Try to move the translating cowl in the extend direction.
 - (b) IF YOU DO NOT USE THE LOAD TOOLS; Try to move the translating cowl in the extend direction as follows:
 - 1) Remove the lock bars that you installed in the deactivation procedure.
 - 2) Put the 0.25 inch (6.4 mm) square drive extensions into the manual cycle and lockout shaft at the No. 2 and No. 3 gearboxes.
 - a) Attach the standard drive tools.
 - 3) Try to move the translating cowl in the extend direction.
 - (c) If the translating cowl moves, replace the air motor and shutoff valve.
- (4) Do a test of the gear box locks:

NOTE: The steps that follow are for the No. 3 gearbox. Then, do these steps again for the No. 2 gearbox.

- (a) Install the lock bars in the manual cycle and lockout shafts at the No. 2 and No. 3 gearboxes.
- (b) Install the INA access platform in the exhaust mixer duct.
- (c) Install the protection pads and the access stools.
- (d) Release the air motor brake:
 - 1) Open the air motor access and pressure relief panel.
 - 2) Pull the air motor brake release handle forward and turn it counterclockwise to lock the handle in its position.
- (e) Turn the manual lock release screw clockwise to engage the No. 3 gearbox lock.
 - 1) Make sure that the lock indicator is retracted (under the surface) at gearbox No. 3.
- (f) Make sure No. 2 gearbox lock is released.
 - 1) Make sure the lock indicator is extended at gearbox No. 2.
- (g) IF YOU USE THE LOAD TOOLS; Do a check of the lock dogs as follows:
 - 1) Remove the lock bars from the No. 2 and No. 3 gearboxes.
 - 2) Install the load tool through the cutout and into the No. 3 gearbox.

- 3) Attach the torque wrench to the load tool.

CAUTION: DO NOT APPLY A TORQUE LOAD OF MORE THAN 30 POUND-INCHES (3.4 NEWTON-METERS) TO THE MANUAL CYCLE AND LOCK OUT SHAFT. A LARGER TORQUE LOAD CAN CAUSE DAMAGE TO THE MECHANISM.

- 4) Apply a torque counterclockwise through the manual wind position of the No. 3 gearbox.
 - a) If the translating cowl does not move, the lock bar touched one of the two lock dogs.
 - b) If the translating cowl moved, lock the thrust reverser until the No. 3 gearbox is replaced.
- 5) Turn the manual lock release screw counterclockwise to release the gearbox lock.
 - a) Make sure that the indication rod comes out of the No. 3 gearbox.
- 6) Turn the manual cycle and lockout shaft counterclockwise a 1/4 of a turn.
- 7) Turn the manual lock release screw clockwise to engage the No. 3 gearbox lock.
 - a) Make sure that the indication rod is fully retracted (under the surface).

CAUTION: DO NOT APPLY A TORQUE LOAD OF MORE THAN 30 POUND-INCHES (3.4 NEWTON-METERS) TO THE MANUAL CYCLE AND LOCKOUT SHAFT. A GREATER TORQUE LOAD CAN CAUSE DAMAGE TO THE MECHANISM.

- 8) Apply a torque counterclockwise through the manual wind position of the No. 3 gearbox.
 - a) If the manual cycle and lockout shaft can not be turned more than approximately 1/4 turn, the second lock dog is serviceable.
 - b) If the manual cycle and lockout shaft can be turned more than approximately 1/4 turn, the second lock dog is unserviceable. Lock the thrust reverser until the No. 3 gearbox is replaced.

NOTE: The two lock dogs are found 1/2 turn apart when you use the manual cycle and lockout shaft. If necessary, do the check again to make sure that the lock dogs are serviceable.

- 9) Do the procedure given above for the No. 2 gearbox lock.
- (h) IF YOU DO NOT USE THE LOAD TOOLS; Do a check of the lock dogs as follows:
 - 1) Remove the lock bars from the No. 2 and No. 3 gearboxes.
 - 2) Put the 0.25 inch (6.4 mm) square drive extensions into the manual cycle and lockout shaft at the No. 2 and No. 3 gearboxes.
 - a) Attach the standard drive tools.

CAUTION: DO NOT APPLY A TORQUE LOAD OF MORE THAN 30 POUND-INCHES (3.4 NEWTON-METERS) TO THE MANUAL CYCLE AND LOCKOUT SHAFT. A LARGER TORQUE LOAD CAN CAUSE DAMAGE TO THE MECHANISM.

- 3) Apply a torque counterclockwise through the manual wind position of the No. 3 gearbox.
 - a) If the translating cowl does not move, the lock bar touched one of the two lock dogs.
 - b) If the translating cowl moved, lock the thrust reverser until the No. 3 gearbox is replaced.
- 4) Turn the manual lock release screw counterclockwise to release the gearbox lock.
 - a) Make sure that the indication rod comes out of the No. 3 gearbox.
- 5) Turn the manual cycle and lockout shaft counterclockwise a 1/4 of a turn.
- 6) Turn the manual lock release screw clockwise to engage the No. 3 gearbox lock.
 - a) Make sure that the indication rod is fully retracted (under the surface).

CAUTION: DO NOT APPLY A TORQUE LOAD OF MORE THAN 30 POUND-INCHES (3.4 NEWTON-METERS) TO THE MANUAL CYCLE AND LOCKOUT SHAFT. A GREATER TORQUE LOAD CAN CAUSE DAMAGE TO THE MECHANISM.

- 7) Apply a torque counterclockwise through the manual wind position of the No. 3 gearbox.
 - a) If the manual cycle and lockout shaft can not be turned more than approximately 1/4 turn, the second lock dog is serviceable.
 - b) If the manual cycle and lockout shaft can be turned more than approximately 1/4 turn, the second lock dog is unserviceable. Lock the thrust reverser until the No. 3 gearbox is replaced.

NOTE: The two lock dogs are found 1/2 turn apart when you use the manual cycle and lockout shaft. If necessary, do the check again to make sure that the lock dogs are serviceable.

- 8) Do the procedure given above for the No. 2 gearbox lock.
- (5) Install the lock bars in the manual cycle and lockout shafts at the No. 2 and No. 3 gearboxes.
- (6) Apply the air motor manual brake:
 - (a) Turn the air motor brake release handle clockwise and then release.
 - (b) Close the air motor access and pressure relief panel.
- (7) Make sure the No. 2 and No. 3 gearbox locks are released.
 - (a) Make sure the lock indicator rods are extended at the No. 2 and No. 3 gearboxes.

- (8) IF YOU USE THE LOAD TOOLS; Try to move the translating cowl in the extend direction as follows:
 - (a) Remove the lock bars from the No. 2 and No. 3 gearboxes.
 - (b) Install the load tools through the cutouts and into the No. 2 and No. 3 gearboxes.
 - (c) Attach the torque wrenches to the load tools.
 - (d) Try to move the translating cowl in the extend direction.
- (9) IF YOU DO NOT USE THE LOAD TOOLS; Try to move the translating cowl in the extend direction as follows:
 - (a) Remove the lock bars from the No. 2 and No. 3 gearboxes.
 - (b) Put the 0.25 inch (6.4 mm) square drive extensions into the manual cycle and lockout shaft at the No. 2 and No. 3 gearboxes.
 - 1) Attach the standard drive tools.
 - (c) Try to move the translating cowl in the extend direction.
- (10) If the translating cowl moves, do the full test again.
 - (a) If the translating sleeve moves again, lock the thrust reverser until you can replace the two locking gearboxes and the air motor and shutoff valve.
- (11) Remove the access stools and protection pads.
- (12) Remove the INA access platform from the exhaust mixer duct.
- (13) Do the activation procedure of the thrust reverser system.
- (14) Do the functional test of the thrust reverser system.

**MCDONNELL DOUGLAS
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-23 MCDONNELL DOUGLAS: Amendment 39-11541. Docket 98-NM-381-AD.

Applicability: Model DC-9-10, -20, -30, -40, and -50 series airplanes; Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), and DC-9-87 (MD-87) series airplanes; Model MD-88 airplanes; and C-9 (military) series airplanes; as listed in McDonnell Douglas Alert Service Bulletin DC9-74A001, Revision 01, dated October 26, 1998; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent an internal electrical short in the engine ignition switch, which could result in smoke in the flight compartment, accomplish the following:

Inspection and Corrective Action

(a) Within 8 months after the effective date of this AD, visually inspect the engine ignition switch to determine what type of switch (rotary or toggle) is installed in the hinged forward overhead switch panel, in accordance with McDonnell Douglas Service Bulletin DC9-74-001, dated May 23, 1997, or McDonnell Douglas Alert Service Bulletin DC9-74A001, Revision 01, dated October 26, 1998.

NOTE 2: Inspection of the five position ignition switches prior the effective date of the AD in accordance with McDonnell Douglas Service Bulletin DC9-74001, dated May 23, 1997, is considered acceptable for compliance with paragraph (a) of this AD.

(1) If the switch is a toggle type, no further action is required by this AD.

(2) If the switch is a rotary type, prior to further flight, determine the switch part number in accordance with the service bulletin.

(i) If the switch has part number 79-2318 (5D0423-2) or 79-2355, no further action is required by this AD.

(ii) If the switch has any part number other than that identified in paragraph (a)(2)(i) of this AD, prior to further flight, replace the engine ignition switch with a new design ignition switch in accordance with the service bulletin.

Spares Affected

(b) As of the effective date of this AD, no person shall install a four position rotary ignition type switch, part number (P/N) 79-2081, 69-1966, or 34064; or a five position rotary type ignition switch, P/N 79-2055 (5D0423-1), 69-1967, 53306-033, or 3600-3076; on any airplane.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

Special Flight Permits

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(e) The actions shall be done in accordance with McDonnell Douglas Service Bulletin DC9-74-001, dated May 23, 1997; or McDonnell Douglas Alert Service Bulletin DC9-74A001, Revision 01, dated October 26, 1998. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Technical Publications Business Administration, Dept. C1-L51 (2-60). Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(f) This amendment becomes effective on March 9, 2000.

FOR FURTHER INFORMATION CONTACT:

Robert Baitoo, Aerospace Engineer, Propulsion Branch, ANM-140L, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5245; fax (562) 627-5210.

Issued in Renton, Washington, on January 25, 2000.

Donald L. Riggins, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**AIRBUS INDUSTRIE
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-24 AIRBUS INDUSTRIE: Amendment 39-11542. Docket 99-NM-247-AD.

Applicability: Model A300, A310, and A300-600 series airplanes; certificated in any category; except those airplanes on which Airbus Modification 10438 has been installed, or on which Airbus Service Bulletin A300-27-0182, Revision 2, A300-27-6023, Revision 2, or A300-27-2065, Revision 2, each dated June 30, 1999, has been accomplished.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent corrosion of the spring rod assemblies of the rudder servo controls, which could result in the jamming of the rudder servo controls and consequent reduced controllability of the airplane, accomplish the following:

(a) For airplanes on which the spring rod assemblies of the rudder servo controls have not been modified in accordance with Airbus Service Bulletin A300-27-182, dated March 16, 1995, or Revision 1, dated November 21, 1996 (for Model A300 series airplanes); A310-27-2065, dated March 16, 1995, or Revision 1, dated March 10, 1997 (for Model A310 series airplanes); or A300-27-6023, dated March 16, 1995, or Revision 1, dated March 10, 1997 (for Model A300-600 series airplanes); as applicable; as of the effective date of this AD: Within 1 year after the effective date of this AD, accomplish the actions specified in either paragraph (a)(1) or (a)(2) in accordance with Airbus Service Bulletin A300-27-182, Revision 2 (for Model A300 series airplanes); or A310-27-2065, Revision 2 (for Model A310 series airplanes); or A300-27-6023, Revision 2 (for Model A300-600 series airplanes); each dated June 30, 1999; as applicable.

(1) Replace the spring rod assemblies with improved spring rod assemblies; or

(2) Modify the existing spring rod assemblies and re-identify all modified spring rod assemblies.

(b) For airplanes on which the spring rod assemblies of the rudder servo controls have been modified in accordance with Airbus Service Bulletin A300-27-182, dated March 16, 1995, or Revision 1, dated November 21, 1996 (for Model A300 series airplanes); or A310-27-2065, dated March 16, 1995, or Revision 1, dated March 10, 1997 (for Model A310 series airplanes); or A300-27-6023, dated March 16, 1995, or Revision 1, dated March 10, 1997 (for Model A300-600 series airplanes); as applicable; as of the effective date of this AD: Within 1 year after the effective date of this AD, perform a one-time visual inspection to verify that all spring rod assemblies of the rudder servo controls have the same part numbers, in accordance with Airbus Service Bulletin A300-27-182, Revision 2 (for Model A300 series airplanes); or A310-27-2065, Revision 2 (for Model A310 series airplanes); or A300-27-6023, Revision 2 (for Model A300-600 series airplanes); each dated June 30, 1999; as applicable.

(1) If all three spring rod assemblies have P/N A2727086500400, A2727086500600, or A2727114900000, no further action is required by this AD.

(2) If any spring rod assembly has a P/N other than P/N A2727086500400, A2727086500600, or A2727114900000, prior to further flight, re-identify all spring rod assemblies to the P/N specified in the applicable service bulletin, in accordance with the applicable service bulletin.

(c) As of the effective date of this AD, no person shall install on any airplane a spring rod assembly having P/N A2727086500200.

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, International Branch, ANM-116.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the International Branch, ANM-116.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(f) The actions shall be done in accordance with Airbus Service Bulletin A300-27-182, Revision 2, dated June 30, 1999; Airbus Service Bulletin A310-27-2065, Revision 2, dated June 30, 1999; or Airbus Service Bulletin

2000-02-24

A300-27-6023, Revision 2, dated June 30, 1999; as applicable. Airbus Service Bulletin A300-27-6023, Revision 2, dated June 30, 1999, contains the following list of effective pages:

Page Number	Revision Level Shown on Page	Date Shown on Page
1-6, 8-12, 17	2	June 30, 1999
7, 13-16	Original	March 16, 1995

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Airbus Industrie, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

NOTE 3: The subject of this AD is addressed in French airworthiness directives 1999-240-288(B), dated June 30, 1999, and 1999-240-288(B) R1, dated December 15, 1999.

(g) This amendment becomes effective on March 9, 2000.

FOR FURTHER INFORMATION CONTACT:

Norman B. Martenson, Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2110; fax (425) 227-1149.

Issued in Renton, Washington, on January 25, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**THE BOEING COMPANY
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-33 BOEING: Amendment 39-11551. Docket 98-NM-252-AD.

Applicability: Model 747-400 series airplanes equipped with General Electric CF6-80C2 series engines, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d)(1) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To ensure the integrity of the fail safe features of the thrust reverser system by preventing possible failure modes in the thrust reverser control system that can result in inadvertent deployment of a thrust reverser during flight, accomplish the following:

Repetitive Functional Tests

(a) Within 1,000 hours time-in-service after the most recent test of the center drive unit (CDU) cone brake performed in accordance with paragraph (b)(1) of AD 94-15-05, amendment 39-8976; or within 650 hours time-in-service after the effective date of this AD, whichever occurs first: Perform a functional test to detect discrepancies of the CDU cone brake on each thrust reverser, in accordance with Boeing Service Bulletin 747-78A2166, Revision 1, dated October 9, 1997; or the applicable section of paragraph III.A. of the Accomplishment Instructions of Boeing Service Bulletin 747-78A2113, Revision 2, dated June 8, 1995, or Revision 3, dated September 11, 1997.

NOTE 2: Accomplishment of the CDU cone brake test during production in accordance with Production Revision Record (PRR) 80452-102 prior to the effective date of this AD is considered acceptable for compliance with the test required by paragraph (a) of this AD.

(1) For Model 747-400 series airplanes equipped with thrust reversers that have not been modified in accordance with Boeing Service Bulletin 747-78-2151 or a production equivalent: Repeat the functional test of the CDU cone brake thereafter at intervals not to exceed 650 hours time-in-service.

(2) For Model 747-400 series airplanes equipped with thrust reversers that have been modified in accordance with Boeing Service Bulletin 747-78-2151 or a production equivalent: Repeat the functional test of the CDU cone brake thereafter at intervals not to exceed 1,000 hours time-in-service.

NOTE 3: Model 747-400 series airplanes, line numbers 1061 and subsequent, equipped with GE CF6-80C2 engines, had a third locking system installed during production in accordance with Production Revision Record (PRR) 80452-102, and were not modified in accordance with Boeing Service Bulletin 747-78-2151 (which is a retrofit action for airplanes having line numbers 700 through 1060 inclusive).

Terminating Action

(b) Accomplishment of the functional test of the CDU cone brake, as specified in paragraph (a) of this AD, constitutes terminating action for the repetitive tests of the CDU cone brake required by paragraph (b)(1) of AD 94-15-05.

Corrective Action

(c) If any functional test required by paragraph (a) of this AD cannot be successfully performed as specified in the referenced service bulletin, or if any discrepancy is detected during any functional test required by paragraph (a) of this AD, accomplish either paragraph (c)(1) or (c)(2) of this AD.

(1) Prior to further flight, repair in accordance with Boeing Service Bulletin 747-78A2166, Revision 1, dated October 9, 1997; or Boeing Service Bulletin 747-78A2113, Revision 2, dated June 8, 1995, or Revision 3, dated September 11, 1997. Or,

(2) The airplane may be operated in accordance with the provisions and limitations specified in the operator's FAA-approved MEL, provided that no more than one thrust reverser on the airplane is inoperative.

Alternative Methods of Compliance

(d) (1) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

(2) Alternative methods of compliance for the functional test of the Thrust Reverser Actuation System (TRAS) lock for Model 747-400 series airplanes powered by General Electric CF6-80C2 series engines that have been modified in accordance with Boeing Service Bulletin 747-78-2151, or production equivalent, approved previously in accordance with AD 94-15-05, amendment 39-8976, are considered to be approved as alternative methods of compliance with this AD.

NOTE 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(f) Except as provided by paragraph (c)(2) of this AD, the actions shall be done in accordance with Boeing Service Bulletin 747-78A2166, Revision 1, dated October 9, 1997; Boeing Service Bulletin 747-78A2113, Revision 2, dated June 8, 1995, and Boeing Service Bulletin 747-78A2113, Revision 3, dated September 11, 1997. This incorporation by reference is approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(g) This amendment becomes effective on March 13, 2000.

FOR FURTHER INFORMATION CONTACT:

Holly Thorson, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1357; fax(425) 227-1181.

Issued in Renton, Washington, on January 28, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**BOMBARDIER, INC.
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-34 BOMBARDIER, INC. (Formerly Canadair): Amendment 39-11552. Docket 99-NM-34-AD.

Applicability: All Model CL-600-2B19 (Regional Jet Series 100) series airplanes, certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To prevent undetected accretion of ice on the wings, which could result in reduced controllability of the airplane during normal icing conditions, accomplish the following:

AFM Revision

(a) Within 10 days after the effective date of this AD: Revise the FAA-approved Canadair Regional Jet Airplane Flight Manual (AFM) by inserting a copy of the pages specified in paragraphs (a)(1), (a)(2), and (a)(3) of this AD into the AFM.

(1) Revise the Limitations Section to include pages 2 and 3 of Canadair Regional Jet Temporary Revision (TR) RJ/61-2, dated October 30, 1998.

(2) Revise the Emergency Procedures Section to include pages 4 through 6 inclusive of Canadair Regional Jet TR RJ/61-2, dated October 30, 1998.

(3) Revise the Normal Procedures Section to include pages 7 through 27 inclusive of Canadair Regional Jet TR RJ/61-2, dated October 30, 1998.

Alternative Methods of Compliance

(b) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, New York Aircraft Certification Office (ACO), FAA, Engine and Propeller Directorate. Operators shall submit their requests through an appropriate FAA Principal Operations Inspector, who may add comments and then send it to the Manager, New York ACO.

NOTE 1: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the New York ACO.

Special Flight Permits

(c) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

(d) The AFM revision shall be done in accordance with Canadair Airplane Flight Manual Temporary Revision RJ/61-2, dated October 30, 1998. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Bombardier, Inc., Canadair, Aerospace Group, P.O. Box 6087, Station A, Montreal, Quebec H3C 3G9, Canada. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(e) This amendment becomes effective on March 13, 2000.

FOR FURTHER INFORMATION CONTACT:

Rodrigo J. Huete, Test Pilot, Systems and Flight Test Branch, ANE-172, FAA, Engine and Propeller Directorate, New York Aircraft Certification Office, 10 Fifth Street, Third Floor, Valley Stream, New York 11581; telephone (516) 256-7518; fax (516) 568-2716.

Issued in Renton, Washington, on January 28, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**RAYTHEON AIRCRAFT COMPANY
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-35 RAYTHEON AIRCRAFT COMPANY (Formerly Beech): Amendment 39-11553. Docket 99-NM-160-AD.

Applicability: Models and series of airplanes as listed in the applicable service bulletin(s) specified in Table 1 of this AD, certificated in any category.

TABLE 1

Model of Airplane	Raytheon Service Bulletin	Date of Service Bulletin
DH.125, HS.125, BH.125 series 1A, 1B, 3A, 3B, 400A, 400B, 401B, 403A, 403B, 600A, 600B, 700A, and 700B airplanes	SB 35-3169	September 1998
BAe.125 series 800A (C-29A) airplanes	SB 35-3171	September 1998
BAe.125 series 800A and 800B airplanes, and Hawker 800 airplanes	SB 35-3034 and SB35-3170	September 1998
BAe.125 series 1000A and 1000B airplanes, and Hawker 1000 airplanes	SB 35-3167 and SB 35-3168	September 1998

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (f) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent flaking of cadmium from certain oxygen system plumbing fittings and cone caps from blocking the valves and impairing the function of the oxygen system, which could deprive the crew and passengers of necessary oxygen during an emergency that requires oxygen, accomplish the following:

(a) For Model DH.125, HS.125, BH.125 series 1A, 1B, 3A, 3B, 400A, 400B, 401B, 403A, 403B, 600A, 600B, 700A and 700B airplanes: Within 6 months after the effective date of this AD, replace the cadmium plated cone caps in the oxygen system plumbing with improved cone caps, and perform a detailed visual inspection of the removed cone caps, tee-piece and sleeve for evidence of flaking or corrosion; in accordance with Raytheon Service Bulletin SB 35-3169, dated September 1998. If any flaking or corrosion is detected, prior to further flight, clean the tee-piece and sleeve, and perform an oxygen system flow check in accordance with the service bulletin. If any discrepancy is found during the flow check, prior to further flight, repair the oxygen system in accordance with the service bulletin, except as required by paragraph (e) of this AD.

NOTE 2: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

(b) For Model BAe.125 series 800A (C-29A) airplanes: Within 6 months after the effective date of this AD, replace the cadmium plated cone caps in the oxygen system plumbing with a improved cone caps, and perform a detailed visual inspection of the removed cone caps, tee-piece and sleeve for evidence of flaking or corrosion; in accordance with Raytheon Service Bulletin SB 35-3171, dated September 1998. If any flaking or corrosion is detected, prior to further flight, clean the tee-piece and sleeve, and perform an oxygen system flow check in accordance with the service bulletin. If any discrepancy is found during the flow check, prior to further flight, repair the oxygen system in accordance with the service bulletin, except as required by paragraph (e) of this AD.

(c) For Model BAe.125 series 800A and 800B airplanes and Model Hawker 800 airplanes: Within 6 months after the effective date of this AD, replace the cadmium plated cone caps in the oxygen system plumbing with improved cone caps, and perform a detailed visual inspection of the removed cone caps, tee-piece and sleeve for evidence of flaking or corrosion; in accordance with Raytheon Service Bulletins SB 35-3034 or SB 35-3170, both dated September 1998, as applicable. If any flaking or corrosion is detected, prior to further flight, clean the tee-piece and sleeve, and perform an oxygen system flow check in accordance with the service bulletin. If any discrepancy is found during the flow check, prior to further flight, repair the oxygen system in accordance with the service bulletin, except as required by paragraph (e) of this AD.

(d) For Model BAe.125 series 1000A and 1000B airplanes and Model Hawker 1000 series airplanes: Within 6 months after the effective date of this AD, replace the cadmium plated fittings in the oxygen system plumbing with improved fittings, and perform a detailed visual inspection of the removed fittings and the pipe connections for evidence of flaking or corrosion; in accordance with Raytheon Service Bulletin SB 35-3167 or SB 35-3168, both dated September 1998, as applicable. If any flaking or corrosion is detected, prior to further flight, clean the pipe connections, and perform an oxygen system flow check in accordance with the service bulletin. If any discrepancy is found during the flow check, prior to further flight, repair the oxygen system in accordance with the service bulletin, except as required by paragraph (e) of this AD.

(e) If any discrepancy is found during a flow check required by paragraph (a), (b), (c), or (d) of this AD and the applicable service bulletin specifies to contact the manufacturer for a repair disposition, prior to further flight, repair the oxygen system in accordance with a method approved by the Manager, Wichita Aircraft Certification Office (ACO), FAA, Small Airplane Directorate.

Alternative Methods of Compliance

(f) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Wichita ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Wichita ACO.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Wichita ACO.

Special Flight Permits

(g) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(h) Except as provided by paragraph (e) of this AD, the actions shall be done in accordance with Raytheon Service Bulletin SB 35-3169, dated September 1998; Raytheon Service Bulletin SB 35-3171, dated September 1998; Raytheon Service Bulletin SB 35-3034, dated September 1998; Raytheon Service Bulletin SB 35-3170, dated September 1998; Raytheon Service Bulletin SB 35-3167, dated September 1998; or Raytheon Service Bulletin SB 35-3168, dated September 1998; as applicable. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Raytheon Aircraft Company, Manager Service Engineering, Hawker Customer Support Department, P.O. Box 85, Wichita, Kansas 67201-0085. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Small Airplane Directorate, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(i) This amendment becomes effective on March 13, 2000.

FOR FURTHER INFORMATION CONTACT:

Paul C. DeVore, Aerospace Engineer, Systems and Propulsion Branch, ACE-116W, FAA, Small Airplane Directorate, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas 67209; telephone (316) 946-4142; fax (316) 946-4407.

Issued in Renton, Washington, on January 28, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**AIRBUS INDUSTRIE
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-36 AIRBUS INDUSTRIE: Amendment 39-11554. Docket 99-NM-254-AD. Supersedes AD 98-20-10, Amendment 39-10777.

Applicability: Model A319, A320, and A321 series airplanes; as listed in Airbus Service Bulletin A320-24-1092, Revision 03, dated September 16, 1998; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent a simultaneous cutoff of the fuel supply to both engines, which could result in a loss of engine power and consequent reduced controllability of the airplane, accomplish the following:

Modification

(a) Within 18 months after October 27, 1998 (the effective date of AD 98-20-10, amendment 39-10777), relocate the engine/master 1 relay (11QG) from relay box 103VU to shelf 95VU in the avionics bay, in accordance with Airbus Service Bulletin A320-24-1092, dated March 26, 1997; Revision 01, dated December 24, 1997; Revision 02, dated March 9, 1998; or Revision 03, dated September 16, 1998. After the effective date of this AD, only Revision 03 shall be used.

(b) For airplanes on which Airbus Service Bulletin A320-24-1092, dated March 26, 1997; Revision 01, dated December 24, 1997; or Revision 02, dated March 9, 1998; has been accomplished prior to the effective date of this AD. Within 500 flight hours after the effective date of this AD, replace the contacts on lines 20 through 23 in shelf 95VU with new contacts, in accordance with paragraph B.(2)(m) of the Accomplishment Instructions of Airbus Service Bulletin A320-24-1092, Revision 03, dated September 16, 1998.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, International Branch, ANM-116.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the International Branch, ANM-116.

Special Flight Permits

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(e) The actions shall be done in accordance with Airbus Service Bulletin A320-24-1092, dated March 26, 1997; Airbus Service Bulletin A320-24-1092, Revision 01, dated December 24, 1997; Airbus Service Bulletin A320-24-1092, Revision 02, dated March 9, 1998; or Airbus Service Bulletin A320-24-1092, Revision 03, dated September 16, 1998; as applicable.

(1) The incorporation by reference of Airbus Service Bulletin A320-24-1092, Revision 03, dated September 16, 1998, is approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(2) The incorporation by reference of Airbus Service Bulletin A320-24-1092, dated March 26, 1997; Airbus Service Bulletin A320-24-1092, Revision 01, dated December 24, 1997; and Airbus Service Bulletin A320-24-1092, Revision 02, dated March 9, 1998, was approved previously by the Director of the Federal Register as of October 27, 1998 (63 FR 50492, September 22, 1998).

(3) Copies may be obtained from Airbus Industrie, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

NOTE 3: The subject of this AD is addressed in French airworthiness directive 1999-263-134(B), dated June 30, 1999.

(f) This amendment becomes effective on March 13, 2000.

FOR FURTHER INFORMATION CONTACT:

Norman B. Martenson, Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2110; fax (425) 227-1149.

Issued in Renton, Washington, on January 28, 2000.

Donald L. Riggins, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**THE BOEING COMPANY
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-37 BOEING: Amendment 39-11555. Docket 99-NM-41-AD.

Applicability: Model 747 series airplanes, line numbers 1 through 1078 inclusive, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent improper latching of latch pins and the mating latch cam on the cargo door, which could result in damage to the structure of the cargo door and doorway cutout and consequent opening of the cargo door during flight, accomplish the following:

One-Time Inspection

(a) Within 30 days after the effective date of this AD, accomplish the requirements of paragraph (a)(1) or (a)(2) of this AD, as applicable, in accordance with Boeing Alert Service Bulletin 747-52A2258, dated June 1, 1995; as revised by Notices of Status Change 747-52A2258 NSC 1, dated July 20, 1995; 747-52A2258 NSC 2, dated August 31, 1995; and 747-52A2258 NSC 03, dated December 14, 1995.

(1) For airplanes having line numbers 1 through 307 inclusive: Perform a one time general visual inspection to determine whether latch pins on the forward and aft lower lobe cargo doors and the main deck side cargo door are installed backward.

(2) For airplanes having line numbers 308 through 1078 inclusive: Perform a one time general visual inspection to determine whether latch pins on the forward and aft lower lobe cargo doors are installed backward.

NOTE 2: For the purposes of this AD, a general visual inspection is defined as: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light, and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

Corrective Actions

(b) If any latch pin is found installed incorrectly during any inspection required by paragraph (a) of this AD, prior to further flight, accomplish the requirements of paragraphs (b)(1) and (b)(2) of this AD.

(1) Reinstall the affected latch pin correctly, in accordance with Boeing Alert Service Bulletin 747-52A2258, dated June 1, 1995; as revised by Notices of Status Change 747-52A2258 NSC 1, dated July 20, 1995; 747-52A2258 NSC 2, dated August 31, 1995; and 747-52A2258 NSC 03, dated December 14, 1995.

(2) Perform structural inspections to detect damage of the affected cargo door and doorway cutout, in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate.

Modification

(c) Within 2 years after the effective date of this AD, modify the latch pin fittings of the forward and aft lower lobe cargo doors, in accordance with Boeing Service Bulletin 747-52-2260, Revision 1, dated March 21, 1996.

NOTE 3: Modification of the latch pin fittings accomplished prior to the effective date of this AD in accordance with Boeing Service Bulletin 747-52-2260, dated December 14, 1995, is considered acceptable for compliance with paragraph (c) of this AD.

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(f) Except as provided by paragraph (b)(2) of this AD, the actions shall be done in accordance with Boeing Alert Service Bulletin 747-52A2258, dated June 1, 1995; as revised by Notices of Status Change 747-52A2258 NSC 1, dated July 20, 1995; 747-52A2258 NSC 2, dated August 31, 1995; and 747-52A2258 NSC 03, dated December 14, 1995; and Boeing Service Bulletin 747-52-2260, Revision 1, dated March 21, 1996. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(g) This amendment becomes effective on March 13, 2000.

FOR FURTHER INFORMATION CONTACT:

Julie Alger, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2779; fax(425) 227-1181.

Issued in Renton, Washington, on January 28, 2000.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**AIRBUS INDUSTRIE
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-02-38 AIRBUS INDUSTRIE: Amendment 39-11556. Docket 99-NM-23-AD. Supersedes AD 91-20-07, Amendment 39-8041.

Applicability: Model A300, A300-600, and A310 series airplanes; certificated in any category; equipped with an auxiliary power unit (APU) fuel feedline adapter, P/N A4937021700000 (welded configuration).

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent an APU compartment fire, accomplish the following:

RESTATEMENT OF REQUIREMENTS OF AD 91-20-07, AMENDMENT 39-8041:

Repetitive Inspections

(a) Within 100 hours time-in-service after October 7, 1991 (the effective date of AD 91-20-07, amendment 39-8041), and thereafter at intervals not to exceed 400 hours time-in-service: Perform a dye penetrant inspection to detect cracks, rupture or fuel leaks at the weld of the fuel feedline adapter, in accordance with Airbus Industrie All Operators Telex (AOT) 49-01, Issue 3, dated April 25, 1991. If cracks, rupture, or fuel leaks are found, replace the adapter with an improved, non-welded one-piece-body adapter prior to the next APU operation, or placard the APU inoperative until the adapter is replaced with the improved adapter, in accordance with Airbus Industrie Service Bulletin A300-49-0049, A300-49-6009, or A310-49-2012; all dated July 12, 1991; as applicable.

(b) Within 100 hours time-in-service after October 7, 1991, verify the correct torque values of the starter motor cable terminals and the generator cable terminals in accordance with Airbus Industrie All Operators Telex (AOT) 49-01, Issue 3, dated April 25, 1991. Correct any torque value discrepancies prior to further flight, in accordance with the AOT.

NEW REQUIREMENTS OF THIS AD:

Installation

(c) Within 15 months after the effective date of this AD, install an improved APU fuel feedline adapter in accordance with the Accomplishment Instructions of Airbus Service Bulletin A300-49-0049, Revision 1 (for Model A300 series airplanes); A300-49-6009, Revision 1 (for Model A300-600 series airplanes); or A310-49-2012, Revision 1 (for Model A310 series airplanes); all dated November 28, 1991; as applicable. Such installation constitutes terminating action for the requirements of this AD.

NOTE 2: Although the service bulletins referenced in paragraph (b) of this AD specify installation of an APU fuel feedline adapter having part number (P/N) A4937021700200, installation of an adapter having P/N A4937021700400 is also acceptable for compliance with the requirements of that paragraph.

Spares

(d) As of the effective date of this AD, no person shall install an APU fuel feedline adapter, P/N A4937021700000 (welded configuration), on any airplane.

Alternative Methods of Compliance

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, International Branch, ANM-116.

NOTE 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the International Branch, ANM-116.

Special Flight Permits

(f) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(g) The actions shall be done in accordance with the following Airbus All Operators Telex (AOT) and Airbus service bulletins:

Service Information Referenced and Date	Page Number	Revision Level Shown on Page	Date Shown on Page
AOT 49-01, Issue 3, April 25, 1991	1-3	3	April 25, 1991
A300-49-0049, July 12, 1991	1-11	Original	July 12, 1991
A300-49-0049, Revision 1	1-4, 7, 8, 11	1	November 28, 1991
November 28, 1991	5, 6, 9, 10	Original	July 12, 1991
A300-49-6009, July 12, 1991	1-9	Original	July 12, 1991
A300-49-6009, Revision 1	1-6, 9	1	November 28, 1991
November 28, 1991	7,8	Original	July 12, 1991
A310-49-2012, July 12, 1991	1-11	Original	July 12, 1991
A310-49-2012, Revision 1	1-4, 7, 8, 11	1	November 28, 1991
November 28, 1991	5, 6, 9, 10	Original	July 12, 1991

(1) The incorporation by reference of Airbus Service Bulletin A300-49-0049, Revision 1, dated November 28, 1991; Airbus Service Bulletin A300-49-6009, Revision 1, dated November 28, 1991; and Airbus Service Bulletin A310-49-2012, Revision 1, dated November 28, 1991; is approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(2) The incorporation by reference of Airbus All Operators Telex (AOT) 49-01, Issue 3, dated April 25, 1991; Airbus Service Bulletin A300-49-0049, dated July 12, 1991; Airbus Service Bulletin A300-49-6009, dated July 12, 1991; and Airbus Service Bulletin A310-49-2012; dated July 12, 1991; was approved previously by the Director of the Federal Register as of October 7, 1991 (56 FR 47672, September 20, 1991).

(3) Copies may be obtained from Airbus Industrie, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

NOTE 4: The subject of this AD is addressed in French airworthiness directive 98-480-269(B), dated December 2, 1998.

(h) This amendment becomes effective on March 13, 2000.

FOR FURTHER INFORMATION CONTACT:

Norman B. Martenson, Manager, International Branch, ANM-116, FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2110; fax (425) 227-1149.

Issued in Renton, Washington, on January 31, 2000.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**THE BOEING COMPANY
AIRWORTHINESS DIRECTIVE
LARGE AIRCRAFT**

2000-03-01 BOEING: Amendment 39-11558. Docket 99-NM-88-AD.

Applicability: Model 747-100 and -200 series airplanes, listed in Boeing Service Bulletin 747-57-2305, Revision 1, dated January 21, 1999; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To detect and correct fatigue cracking of the upper and lower chords of the wing front spar, which could result in reduced structural capability and possible fuel leakage onto an engine and a resultant fire, accomplish the following:
Inspections and Corrective Action

(a) Prior to the accumulation of 12,000 total flight cycles, or within 24 months after the effective date of this AD, whichever occurs later, accomplish an ultrasonic inspection for cracking of the upper and lower chord of the wing front spar, in accordance with Boeing Service Bulletin 747-57-2305, Revision 1, dated January 21, 1999.

NOTE 2: Accomplishment of an open hole high frequency eddy current inspection in accordance with Figure 6 of Boeing Service Bulletin 747-57-2305, Revision 1, dated January 21, 1999, is acceptable for compliance with the inspection requirement of paragraph (a) of this AD.

(1) If no cracking is found, repeat this inspection thereafter at intervals not to exceed 6,000 flight cycles, until the requirements of paragraph (c) of this AD have been accomplished.

(2) If any cracking is found, prior to further flight, accomplish "Part 2 - Terminating Action" of the Accomplishment Instructions of the service bulletin, except as provided by paragraph (b) of this AD. Accomplishment of this action constitutes terminating action for the requirements of this AD.

(b) During accomplishment of the terminating action required by paragraph (a)(2) of this AD, if any crack is found in the upper chord that is outside the limits specified in Boeing Service Bulletin 747-57-2305, Revision 1, dated January 21, 1999; or if any crack is found in the lower chord; prior to further flight, repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate; or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative who has been authorized by the FAA to make such findings. For a repair method to be approved by the Manager, Seattle ACO, as required by this AD, the Manager's approval letter must specifically reference this AD.

Optional Terminating Action

(c) Accomplishment of "Part 2 - Terminating Action" of the Accomplishment Instructions of Boeing Service Bulletin 747-57-2305, Revision 1, dated January 21, 1999, constitutes terminating action for the requirements of this AD.

NOTE 3: Accomplishment of the wing and strut modification specified in AD 95-10-16, amendment 39-9233, or AD 95-13-07, amendment 39-9287, or the optional terminating action specified in AD 99-10-09, amendment 39-11162, constitutes terminating action for the repetitive inspections required by paragraph (a) of this AD, provided that an HFEC inspection of subject fastener holes has been accomplished in accordance with Boeing 747 Non-Destructive Test Manual D6-7170, Part 6, Subject 51-00-00, Figure 16, prior to oversizing of the holes in accordance with AD 95-10-16, AD 95-13-07, or AD 99-10-09, and the holes were found to be free of cracks, corrosion, or damage.

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

NOTE 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(f) Except as provided by paragraph (c) of this AD, the actions shall be done in accordance with Boeing Service Bulletin 747-57-2305, Revision 1, dated January 21, 1999. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(g) This amendment becomes effective on March 13, 2000.

FOR FURTHER INFORMATION CONTACT:

Tamara L. Anderson, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2771; fax(425) 227-1181.

Issued in Renton, Washington, on January 31, 2000.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

**GENERAL ELECTRIC COMPANY
AIRWORTHINESS DIRECTIVE
ENGINE
LARGE AIRCRAFT**

2000-03-02 GENERAL ELECTRIC COMPANY: Amendment 39-11559. Docket 98-ANE-51-AD.

Applicability: General Electric Company (GE) GE90-90B, -85B, and -76B series turbofan engines, with fan mid shafts, part numbers (P/Ns) 1767M71G01, 1767M71G02, and 1767M75G02, installed. These engines are installed on but not limited to Boeing 777 series aircraft.

NOTE 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent fan mid shaft failure, which could result in a total loss of thrust and inflight engine shutdown, accomplish the following:

Reduced Life Limits

(a) Remove from service fan mid shafts and replace with serviceable parts prior to the following new, lower cyclic life limits:

(1) For fan mid shafts, P/N 1767M71G01, installed on GE90-85B and -90B series engines, the new life limit is 4,200 cycles-since-new (CSN).

(2) For fan mid shafts, P/N 1767M71G02, installed on GE90-85B and -90B series engines, the new life limit is 4,200 CSN.

(3) For fan mid shafts, P/N 1767M75G02, installed on GE90-76B, -85B, and -90B series engines, the new life limit is 8,200 CSN.

(b) This AD establishes new life limits for fan mid shafts, P/N 1767M71G01, 1767M71G02, and 1767M75G02. Except as provided in paragraph (c) of this AD, no alternate life limits for these affected parts may be approved.

Alternative Methods of Compliance

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Engine Certification Office. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Engine Certification Office.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Engine Certification Office.

(d) This amendment becomes effective on April 7, 2000.

FOR FURTHER INFORMATION CONTACT:

William S. Ricci, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone 781-238-7742, fax 781-238-7199.

Issued in Burlington, Massachusetts, on February 1, 2000.

David A. Downey, Assistant Manager, Engine and Propeller Directorate, Aircraft Certification Service.

**GENERAL ELECTRIC COMPANY
AIRWORTHINESS DIRECTIVE
ENGINE
LARGE AIRCRAFT**

2000-03-03 GENERAL ELECTRIC COMPANY: Amendment 39-11560. Docket 99-NE-49-AD.

Applicability: General Electric Company (GE) CF34-3A1 and -3B1 series turbofan engines, installed on but not limited to Bombardier Canadair CL601R (RJ) aircraft.

NOTE 1: This airworthiness directive (AD) applies to each engine identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For engines that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent critical life-limited rotating engine part failure, which could result in an uncontained engine failure and damage to the airplane, accomplish the following:

Inspections

(a) Within the next 30 days after the effective date of this AD, revise the CF34 Engine Maintenance Program, Chapter 5-21-00, of the GE CF34 Series Turbofan Engine Manual, SEI-756, and for air carrier operations revise the approved continuous airworthiness maintenance program, by adding the following:

“9. CF34-3A1 and CF34-3B1 Engine Maintenance Program – Shop Level Mandatory Inspection Requirements.

A. This procedure is used to identify specific piece-parts that require mandatory inspections that must be accomplished at each piece-part exposure using the applicable Chapters referenced in Table 804 for the inspection requirements.

B. Piece-part exposure is defined as follows:

1. For engines that utilize the “On Condition” maintenance requirements:

The part is considered completely disassembled when done in accordance with the disassembly instructions in the GEAE engine authorized overhaul Engine Manual, and the part has accumulated more than 100 cycles-in-service since the last piece-part opportunity inspection, provided that the part was not damaged or related to the cause for its removal from the engine.

2. For engines that utilize the “Hard Time” maintenance requirements:

The part is considered completely disassembled when done in accordance with the disassembly instructions used in the “Minor Maintenance” or “Overhaul” instructions in the GEAE engine authorized Engine Manual, and the part has accumulated more than 100 cycles in service since the last piece-part opportunity inspection, provided that the part was not damaged or related to the cause for its removal from the engine.

C. Refer to Table 804 below for the mandatory inspection requirements.

TABLE 804. MANDATORY INSPECTION REQUIREMENTS

PART NOMENCLATURE	MANUAL SUBJECT	CHAPTER/SECTION/	MANDATORY INSPECTION
Fan Disk (all)	72-21-00, INSPECTION		All areas (FPI) ¹ , Bores (ECI) ²
Stage 1 high pressure turbine (HPT)	72-46-00, INSPECTION		All areas (FPI) ¹ , Bores (ECI) ² , Boltholes (ECI) ² , Air Holes (ECI) ²
Rotor Disk (all)			All areas (FPI) ¹ , Bores (ECI) ² , Boltholes (ECI) ² , Air Holes (ECI) ²
Stage 2 HPT Rotor Disk (all)	72-46-00, INSPECTION		All areas (FPI) ¹ , Bores (ECI) ² , Boltholes (ECI) ² , Air Holes (ECI) ²
HPT Rotor Outer Torque Coupling (all)	72-46-00, INSPECTION		All areas (FPI) ¹ , Bore (ECI) ²

¹ FPI = Fluorescent Penetrant Inspection Method

² ECI = Eddy Current Inspection”

(b) Except as provided in paragraph (c) of this AD, and notwithstanding contrary provisions in section 43.16 of the Federal Aviation Regulations (14 CFR 43.16), these mandatory inspections shall be performed only in accordance with the CF34 Engine Maintenance Program, Chapter 5-21-00, of the General Electric Company, CF34 Series Turbofan Engine Manual, SEI-756.

(c) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Engine Certification Office. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector (PMI), who may add comments and then send it to the Engine Certification Office.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this airworthiness directive, if any, may be obtained from the Engine Certification Office.

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

(e) FAA-certificated air carriers that have an approved continuous airworthiness maintenance program in accordance with the record keeping requirement of § 121.369 (c) of the Federal Aviation Regulations [14 CFR 121.369 (c)] must maintain records of the mandatory inspections that result from revising the CF34 Engine Maintenance Program and the air carrier's continuous airworthiness program. Alternately, certificated air carriers may establish an approved system of record retention that provides a method for preservation and retrieval of the maintenance records that include the inspections resulting from this AD, and include the policy and procedures for implementing this alternate method in the air carrier's maintenance manual required by § 121.369 (c) of the Federal Aviation Regulations [14 CFR 121.369 (c)]; however, the alternate system must be accepted by the appropriate PMI and require the maintenance records be maintained either indefinitely or until the work is repeated. Records of the piece-part inspections are not required under § 121.380 (a) (2) (vi) of the Federal Aviation Regulations [14 CFR 121.380 (a) (2) (vi)]. All other operators must maintain the records of mandatory inspections required by the applicable regulations governing their operations.

NOTE 3: The requirements of this AD have been met when the engine manual changes are made and air carriers have modified their continuous airworthiness maintenance plans to reflect the Engine Maintenance Program requirements specified in the GE CF34 Series Turbofan Engine Manual.

(f) This amendment becomes effective on March 13, 2000.

FOR FURTHER INFORMATION CONTACT:

Kevin Donovan, Aerospace Engineer Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803-5299; telephone: (781) 238-7743, fax: (238) 238-7199.

Issued in Burlington, Massachusetts, on February 1, 2000.

David A. Downey, Assistant Manager, Engine and Propeller Directorate, Aircraft Certification Service

**MCDONNELL DOUGLAS
AIRWORTHINESS DIRECTIVE
EMERGENCY
LARGE AIRCRAFT**

2000-03-51 MCDONNELL DOUGLAS: Docket 2000-NM-58-AD.

Applicability: All Model DC-9, Model MD-90-30, Model 717-200, and Model MD-88 airplanes; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent loss of pitch trim capability due to excessive wear of the jackscrew assembly of the horizontal stabilizer, which could result in loss of vertical control of the airplane, accomplish the following:

(a) Prior to the accumulation of 650 hours total time-in-service (TTIS), or within 72 hours after receipt of this AD, whichever occurs later, accomplish the actions required by paragraphs (a)(1), (a)(2), (a)(3), (a)(4), and (a)(5) of this AD; in accordance with Boeing Alert Service Bulletin DC9-27A362 (for Model DC-9 and Model MD-88 airplanes), Boeing Alert Service Bulletin MD90-27A034 (for Model MD-90-30 airplanes), and Boeing Alert Service Bulletin 717-27A0002 (for Model 717-200 airplanes), all dated February 11, 2000. Repeat the inspections, thereafter, at intervals not to exceed 650 flight hours.

(1) Perform a general visual inspection of the lubricating grease on the jackscrew assembly and the area directly below the jackscrew and surrounding areas for the presence of metal shavings and flakes in accordance with paragraph 3.B.2. of the Accomplishment Instructions of the applicable alert service bulletin. If the presence of metal shavings or flakes is detected, prior to further flight, remove and replace the jackscrew assembly with a new or serviceable assembly, in accordance with the applicable alert service bulletin.

(2) Perform a general visual inspection of the jackscrew assembly to detect the presence of corrosion, pitting, or distress in accordance with paragraph 3.B.3. of the Accomplishment Instructions of the applicable alert service bulletin. If any corrosion, pitting, or distress is detected, prior to further flight, replace the jackscrew assembly with a new or serviceable assembly, in accordance with the applicable alert service bulletin.

(3) Check the condition of the jackscrew assembly lubricant in accordance with paragraph 3.B.4. of the Accomplishment Instructions of the applicable alert service bulletin. If the jackscrew assembly is dry, lubricate the assembly in accordance with the applicable alert service bulletin.

(4) Inspect the horizontal stabilizer jackscrew upper and lower mechanical stops for general condition in accordance with paragraph 3.B.5. of the Accomplishment Instructions of the applicable alert service bulletin, and record the condition.

(5) Perform a test of the horizontal stabilizer shutoff controls in accordance with paragraph 3.B.6. of the Accomplishment Instructions of the applicable alert service bulletin. If the mechanical stop on the jackscrew contacts the mechanical stop on the acme nut prior to limit switch shutoff, prior to further flight, adjust the horizontal stabilizer trim system in accordance with operator-approved maintenance instructions.

NOTE 2: For the purposes of this AD, a general visual inspection is defined as: "A visual examination of an interior or exterior area, installation or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

(b) Within 2,000 flight hours since the last acme screw and nut wear check conducted in accordance with the DC9 McDonnell Douglas Maintenance Manual, Chapter 27-41-1; MD80 McDonnell Douglas Maintenance Manual, Chapter 27-41-01; MD90 McDonnell Douglas Maintenance Manual, Chapter 27-41-10; or 717 McDonnell Douglas Maintenance Manual, Chapter 27-41-04; or within 30 days after receipt of this AD, whichever occurs later: Perform an acme screw and nut wear check in accordance with paragraph 3.B., Phase 2, paragraph 2. of the Accomplishment Instructions of Boeing Alert Service Bulletin DC9-27A362 (for Model DC-9 and Model MD-88 airplanes), Boeing Alert Service Bulletin MD90-27A034 (for Model MD-90-30 airplanes), and Boeing Alert Service Bulletin 717-27A0002 (for Model 717-200 airplanes), all dated February 11, 2000. Repeat the inspections, thereafter, at intervals not to exceed 2,000 flight hours.

NOTE 3: Accomplishment of paragraphs (c), (d), and (e) of the Boeing Service Engineering Message Number M-7200-00-00456, dated February 9, 2000, constitutes compliance with paragraphs (a)(2), (a)(3), and (a)(4) of this AD. Accomplishment of paragraph (a) of Boeing Service Engineering Message Number M-7200-00-00456 constitutes compliance with paragraph (b) of this AD.

Reporting Requirement

(c) If any damage is detected during any inspection required by paragraphs (a) and (b) of this AD, within 48 hours after accomplishing the inspections, report the inspection results in accordance with Boeing Alert Service Bulletin DC9-27A362 (for Model DC-9 and Model MD-88 airplanes), Boeing Alert Service Bulletin MD90-27A034 (for Model MD-90-30 airplanes), and Boeing Alert Service Bulletin 717-27A0002 (for Model 717-200 airplanes), all dated February 11, 2000. If no damage is detected during any inspection required by this AD, report the inspection results within 10 days of accomplishing that inspection in accordance with the appropriate alert service bulletin. For airplanes that are inspected after receipt of this AD, include in the report the serial number of the airplane, the number of total flight hours and flight cycles accumulated on the airplane. to the Manager, Los Angeles Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5320; Fax (562) 627-5210. Information collection requirements contained in this regulation have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*) and have been assigned OMB Control Number 2120-0056.

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Los Angeles ACO, FAA, Transport Airplane Directorate. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

NOTE 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Manager, Los Angeles ACO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

(f) Telegraphic AD 2000-03-51, issued on February 11, 2000, becomes effective upon receipt.

FOR FURTHER INFORMATION CONTACT: Michael E. O'Neil, Senior Engineer, Structures Branch, ANM-120L, FAA, Transport Airplane Directorate, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712; telephone (562) 627-5320; Fax (562) 627-5210.

Issued in Renton, Washington, on February 11, 2000

Donald L. Riggan, Acting Manager, Transport Airplane Directorate Aircraft Certification Service